STATE AND AGRARIAN CHANGE IN BIHAR

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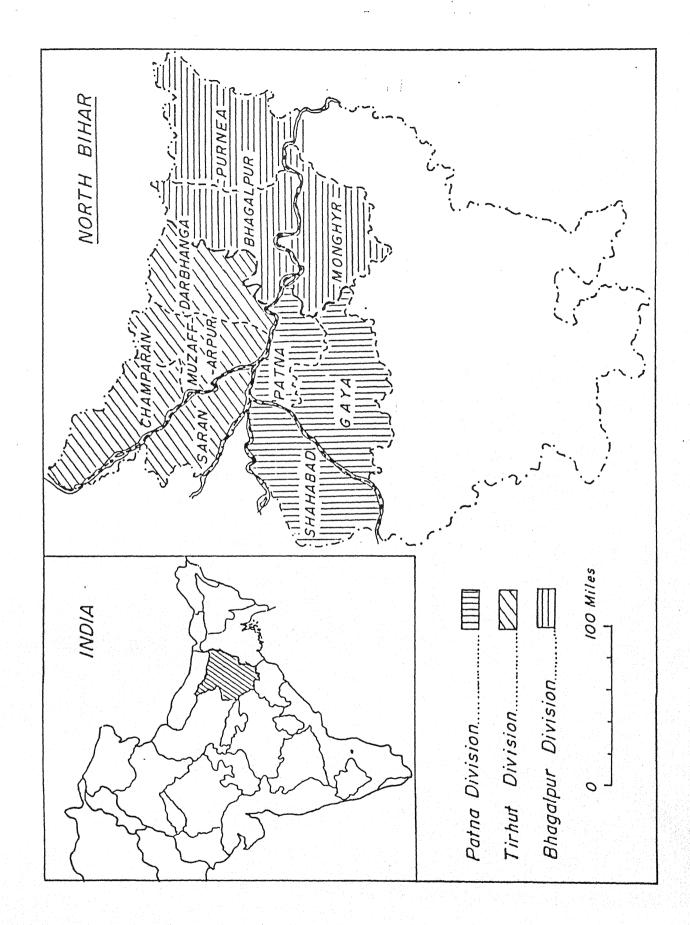
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Chapter I

INTRODUCTION

In 1757 the East India Company acquired the Dewani of Bengal, Bihar and parts of Orissa which later came to be known as the Bengal Presidency. Bihar formed the western most region of the presidency. In 1858 the rule of this province was assumed by the British Parliament along with the rest of the country as a sequel to the countrywide protest against the buccaneering mercantilist policy of the Company which is known as the first Independent movement of the country.

During these two hundred years of its rule, the Pax Britannica substantially altered the social structure of this country through trade and tariff, railways, roads and canal constructions¹ as well as through land legislations etc., all superimposed from above ². The Indian economy, Marx said, was thus dragged into world economy, the greater part of its productive forces either destroyed or refashioned to meet the needs of the British economy and the Indian economy was forced into a satellite economy (Marx and Engels, 1965; Ghosh, 1985) ³.

In these earlier writings Marx talked about the dual character of bourgeois and said that the British bourgeois by destroying the unchanging pre-capitalist societies like India would ultimately pave the way for subsequent progress of these societies. In his subsequent writings, however, he became silent about this progressive aspects of bourgeois and talked about their disasterous effect on the colonies ⁴. In these later writings he also talked about the resilence of the pre-capitalist formations and suggested that the obstructions put up by these pre-capitalist forces would ultimately decide the process of change in these societies like India and China ⁵.

^{1.} On the impact of roads and railways on the colonial economy, see Bagchi (1982:85-90). For specifically railways, see Thorner (1950) and for irrigation in the context of the United Province, see Whitecombe (1971).

^{2.} For the background discussions of various legislative and administrative measures and the factors that gave them their final shapes, see Guha (1969) and Stokes (1969).

^{3.} See the letter written by Marx to N. F. Danielson, April 10, 1879 in Marx and Engels (1965) and the articles of Marx in Marx and Engels in <u>On Colonialism</u>.

^{4.} Lenin also talked about the regressive character of the capitalism at the stage of imperialism, Lenin (1977: 298-300). Luxemburg specifically pointed out the internal strength of the native economy and how the capitalist colonialism would take long time to refashion. Luxemburg (1951: 363-385).

^{5.} See Mao on this: "External causes (i.e. colonialism here)", Mao said, "are the conditions of change and internal causes are the basis of change and that external causes become operative through internal causes. (Mao Ze-dong, 1968: 28)

Looking from this point of view, the literature on colonial India can be divided into two broad categories. One that looks into economic growth from the technological-economic point of view ⁶. It assesses economic growth in terms of the growth of the factors of production, the human labour itself being reduced to one of the factors of production. The other school looks into economic development from the point of view of change in the relations between workers and non-workers in the process of work. This is the political economy school. We will confine our discussions within this later school.

The debate on the mode of production of the Indian agriculture? falls within this later school. The debate has thrown up many important questions about colonialism, imperialism and process of change in the transitional societies like India (Rudra, 1970; Patnaik, 1971, 1972a, 1972c; Chattopadhyay, 1972a, 1972b; Alavi, 1975). But the debate has remained confined to the specific theortical issues as such. The scholars have intensely debated the issues like the character of Indian agriculture (Patnaik, 1971; Chattopadhyay, 1972b) or such questions as whether the growth of agriculture labour is the necessary and sufficient condition of growth of capitalist relation or on the degree of correspondence between the productive forces and production relations in the transitional agriculture. But the study of the concrete situation remains relatively ignored.

The other limitation of the debate is that it gave inadequate attention to the study of the <u>process</u> of development in the Indian agriculture through scholars like Patnaik (1971, 1981), Rao (1970), and Chattopadhyay (1972b) frequently mentioned the importance of the study of the process or trend to fully comprehend the emerging relations in the Indian agriculture. Of course, in this the scholars were hamstrung by the use of the data. Patnaik (1971, 1972a, 1972b) based her argument on her study of the sixty-six big farmers in the ten districts of five states. The basis of Rudra's (1970) work was the farm management survey. But these studies are mostly one-point cross sectional studies and their limitation for any analysis of the process of change is obvious. Others

^{6.} Political economy, Rubin says, do not deal with relation between things to things as done by Vulgar economists, nor relation between people to things as by marginalists, but relation between people to people in the process of production (Rubin, 1973).

^{7.} The debate has, by and large, remained confined to the agriculture. For critical review of this debate see, Hariss (1980), Thorner (1982) and Pandian (1970).

^{8.} Some recent exceptions are there however. See, for example, Pandian (1990).

like Chattopadhyay (1972b) and Prasad (1972, 1973) used information from official sources for their study 9. But in their case too the difficulties of matching official information to the needs of the analysis of the complex process of change in a transitional society are clearly evident.

Further, the debate ignores other sectors of the Indian economy and, therefore, fails to present the holistic view of the development process. Beyond this debate, however, there is a burgeoning literature on this aspect of the colonial economy. They can be divided into two broad categories ¹⁰. One is the nationalist school who approached the problem of Indian economy under colonialism from the point of view of the British apporpriation of vital resources from India. The works of Majumdar, Gadgil, Dutt, Gopal, etc. fall in this category. Within the explicit Marxist framework there are works which approach the problem primarily in the form of relationship of capitalist colonialism and their dependent colonies. We have in this category M. N. Roy, Rajni Palme Dutta, Pavlov, Levkovski, Chandra et. al.

In recent times we have one major addition in this literature in Bagchi's <u>Private Investment in India</u>, dealing primarily with the impact of British tariff policy on the course of Indian industrialisation. In his subsequent work <u>The Political Economy of Under development</u>, Bagchi further extended his framework to include the study of the development of China, Indonesia and India under the aegis of capitalist colonialism. In these and other of his subsequent writings, Bagchi raised many crucial questions regarding the character of colonialism and imperialism in the colonial societies. Two things need some special mentioning here. First, various infrastructures that the colonists super-imposed on the colonial societies had been fashioned, on the one hand, to serve the colonists' interest and, on the other hand, to preserve the indigenous precapitalist formations ¹¹. Second, in his study of India, China and Indonesia, along with Latin American countries, he has shown that the internal formations of these societies have put specific character to the development of these societies under the capitalist colonialism (Bagchi, 1982 : 72-94).

^{9.} See also Alavi (1975), Sen (1976), Banaji (1977), etc.

^{10.} For literature, see Sarkar (1983) and Kumar and Desai (1982).

^{11.} On India, see Bagchi (1982: 78-94). The specific marxist argument is that during its early competitive stage the capitalist relations completely radicalised and replaced the pre-capitalist relations. But during the stage of imperialism, the Capital lost its progressive character, became reactionary and tended to preserve the pre-capitalist relations to cater to its needs.

Besides this, there are other works on specifics of Indian economy like commercialisation of agriculture. Notable among these, and relevant to us, is Blyn's (1962) work on the agricultural production of British India from 1892 to 1947 ¹². Using the crop data, Blyn has shown that in a generally depressing agriculture in British India, the cash crop production increased. While the British India as a whole and specially Eastern region lagged behind and certain areas within it have prospered. There are also other works which deals with specific problems of specific regions. For example, we have to name a few prominant ones, Whitecombe (1971) and Amin (1984) dealing with the agrarian relations in the United Province; Dewey (1974), Heston (1973), Charlesworth (1979) and Guha (1985) on Bombay Presidency; Bhattacharya (1985) on Punjab; Mishra (1985) on Punjab and Bombay.

On Eastern India in general and Bihar in particular, Choudhuri has done significant amount of work on commercialisation of agriculture in Bengal and Bihar region, specially in the nineteenth century as also on agrarian classes including the labouring classes ¹³. We will note briefly his articles "Agricultural growth in Bengal and Bihar, 1790-1860" (1976) and his writings in the <u>Cambridge Economic History of India</u> (1982).

The agricultural production in Bihar in the nineteenth century, Choudhuri said, was slow and uneven (1976: 331). In some of the Bihar districts the pace was quicker in the first half of nineteenth century than in the second. The growth took place, according to Chaudhuri, in the backdrop of 1769-70 famine, radical institutional changes, particularly in the land relations and in a situation of general labour scarcity, In Bihar, in the period subsequent to that some agricultural growth was possible due to population growth and immigration of tribal and semi-tribal labour. But the expected growth was arrested due to poor labour quality, deadly desease and widespread prevalence of indebted, attached labourers.

In the <u>Cambridge Economic History of India</u>, Choudhuri describes the 'labouring classes in greater details'. First, the agricultural labourers were not always Indless, but they usually derived greater part of their income from working in others farm. Second, they were distinguished from the share-croppers by status which was reinforced by the

^{12.} We have restricted ourselves to only commercialisation of agriculture which is directly relevant to us. For detailed bibliography, see Sarkar (1983); Kumar and Desai (1982) and also Charlesworth (1985).

^{13.} See for example, Chaudhury (1967, 1975, 1975b).

caste system. The agricultural labourers came from the lowest castes. Third, the share-croppers planed their production. But the agricultural labourers merely worked in others farm. But then these two were not exclusive categories ¹⁴.

In Bihar, Chaudhuri arqued, in the late nineteenth and twentieth century the components of the labouring classes changed. The bondedness declined and the number of agricultural labourers increased. The loss of land, diminution of per capita holding size, inpoverishment of peasantry, increased the number of agricultural labourer (Chaudhuri, 1982: 176). On the other hand, the number of attached labour declined due to increased alternative job opportunities (e.g. in sugar mills), legal sanctions and peasant protests (Choudhuri, 1982: 164-165).

Choudhuri, however, emphatically pointed out that the deficiency of the agricultural data makes it almost impossible to either measure the changes in the composition of the labouring classes adequately or to identify the factors contributing to its changes. The wage data was also, faulty. It is not possible to measure the changes in the income of the agricultural labourers. But there is no doubt, Choudhuri says, that there was an increasing tendency to pay wages in inferior grains. Further, the wages of tribal labourers declined by 25 per cent (Choudhuri: 164-172).

Choudhuri's discussion of crop production in Bengal and Bihar ends at 1860s. Our study covers the period between 1892-1941. This is perhaps the most crucial period of agrucultural production in British India as it is during this period the British Raj penetrated deep inside the Indian territory through the construction of rail and roadways which brought in its trail the market and traders ¹⁵. During this period the agricultural labourers also grew in number in Bihar. Choudhuri pointed out that during this period the number of landless casual labourers increased and the number of bonded labours decreased. It is, however, difficult to assume that the growth in the number of landless agricultural labour will automatically lead to decline in the bondedness. The reality is more complex and needs greater probing.

In this study the focus will be on these two aspects of a colonial society in the context of the concrete situation of North Bihar comprised of the northern districts of the province of Bihar. Situated between the Bengal proper in the east, the United Province

^{14.} For the limitations in their power of decision making, see Bharadwaj (1974:3 and 4).

^{15.} See on this Thorner (1950).

in the west, the Nepal <u>terai</u> in the north and the Orissa-Madhya Pradesh region in the south, the province of Bihar was part of the Bengal Presidency till 1911. In 1911 the province of Bihar along with Orissa was separated from the Bengal Presidency. In 1936 Bihar was separated from Orissa to form the modern province of Bihar.

In terms of physical geography this landmass can be divided into two: the fertile plains of North Bihar and the plateau of south Bihar. The North Bihar plains constitute the region of out study. Except the forested areas of the district of Champaran in the North-West, the rest of this region is plain land. Except the undifferentiated soil in the district of Champaran, the region generally has alluvial soil cover (Geddes, 1982: 170-123).

Winter-cut rice is the main crop. It is also the main cereals of the Bihari. The autumn rice constitutes lesser portion of the total rice produced in Bihar. It is quick-growing, low yield per acre crop. Wheat, Barley, pulses and oil seeds are the main rabi crops. With the waning of the indigo cultivation in the nineteenth century, the sugarcane emerged as the main cash crop.

The agricultural season begin in the month of April, with the first early showers. But the agricultural activities are carried on according to the Hindu calendar, which is divided into 27 lunar asterisms, called <u>nakshatras</u>, of roughly similar length (Grierson: 270-285). The winter rice is transplanted from nurseries in the month of July and August. The crop continues to grow with the water till mid-September when the water is drained off. It needs inundation after fifteen days at the time of <u>Hathiya nakshatra</u> (26th September to 7th October). The <u>Hathiya</u> rain is therefore considered crucial to the peasants, for the failure of <u>Hathiya</u> rain means the failure of winter crop and scarcity. The anxiety of the peasants about a timely <u>Hathiya</u> rain is reflected in numerous religious functions during this period.

The anxiety of the cultivators had material basis. The only source of water in this region was the monsoon, which was unpredictable. The record shows that in the course a monsoonal cycles of four to five years there is usually a two or three years of unfavourable monsoon. Only alternative to this whimsical water supply sources is the irrigation. But the irrigation in this region is inadequate. The situation in the south Bihar districts is only relatively better where cenals, ahars and pyne provided some respite to the water scarcity. All these means that the failure of monsoon leads to shrinkages in the

agricultural activities. With little or no industries except sugar mills and medium size railway workshops, the agricultural depression means scarcity and sufferings for the dominantly agricultural population of North Bihar.

The agricultural production in this region had not been vary encouraging since almost the second half of the ninteenth century. As pointed out by Choudhuri, the agricultural production in Bihar between 1770 and 1860 had been slow and uneven. Blyn (1966) further pointed out that the crop production in the eastern part of British India between 1892 and 1944 lagged behind and said that the maladies for this depression possibly lied in the Bihar-Orusa region. Islam (1978) further strengthened Blyn's observation by showing that the agricultural production in Bengal proper between 1920 and 1947 was not that stagnant. In the first three chapters of this work these observations will be enquired into in the light of the crop production in North Bihar in the period between 1892 and 1941. In the rest of the chapters the conditions of the rural labouring classes, their income etc., their relations with their cultivator employers and also the changes in their relationship will be probed. The focus all along this work will be to study these changes in the context of the increasing market penetration under the aegis of colonialism.

Chapter II

ON CROP STATISTICS

"All that is done at present is for the local police officers to make a guess, at which in succession the sub-divisional officer, the District officer and the Director of Agriculture guess again" - J.A. Hubback in Sampling for Rice Yield in Bihar and Orissa.

The collection of agricultural statistics in India largely followed the diktat of the State (Meston, 1933: 1-20). In the Mughal period, the Mughal State wanted information on land and the land revenue and the Mughal administration collected volumes of information on these items. In the initial period of its rule, the British Raj was primarily concerned with the nature of property in the Indian land and the revenue possibilities from it, and the British administration collected and published large amount of data on these items. In the later part of its rule the recurring famines and expanding commercial activities made the Raj aware of the necessities of information concerning agricultural production, population etc and the Raj officials collected considerable amount of information on these items.

For our purposes, this information can broadly be categorised into two types. One category comprises the reports, notes, memoranda etc. written by the officials at various levels. They contain not only quantitative information but also the official comments and observations. The other consists of the information on cropped area, agricultural production, etc. i.e., primarily the quantitative information, which were collected in a routine manner and published in such official publications as <u>Season and Crop Reports</u>, <u>Agricultural Statistics</u> etc.

In this chapter and the following two we will primarily be concerned with the second categories of information though we will also be using official observations etc. i.e. the qualitative information as support for our argument based on the first.

2.1 On method of crop estimation

The crop statistics are estimated figures, estimated by the Agricultural Departments. The estimating formula is as follows: crop acreage x standard (normal yield) per acre x seasonal condition. Thus if the cropped acre is 60,000 acres, the standard

1. Hubback (1921)

yield 500 lbs. per acre and the percentage estimate(condition factor) 80 percent, we have 2

 $60000 \times 500 \times 80/100 = 24,000,000$ lbs. of output.

Estimators are, therefore, (1) area, (2) standard yield per acre and (3) condition factor or percentage estimate.

In the temporarily settled areas the acreage data was collected by the <u>Patwaris</u>³. In the permanently settled areas, however, with the absence of any definite data collecting system it fell on the lowly <u>Chowkidara</u> to collect the acreage data, ⁴ though in some areas of permanently settled areas it fell on the <u>Patwaris</u> to collect the crop data. But these were exceptions ⁵.

The acreage data collected by the <u>Chowkidar</u> have often been described as conjectural and unreliable ⁶. The district officials reports in Bihar had repeatedly complained that though the <u>Chowkidar</u>, the village policeman, <u>and the Patwari</u>, (who kept the land records) were employers of the State, they remained by and large subservient to the rural gentry, who could try and influence the <u>Patwaris</u> and the <u>Chowkidars</u> to underreport the cropped areas and thus earn revenue remission. Desai, however, did not agree with the view that this collusion between <u>Patwaris</u> and the <u>Zamindar</u> is a source of distortion of the crop statistics (Desai, 1978: 175-176; Bagchi, 1982: 84). He argued that the remission of revenue was usually granted by the district officials who whould decide about it only after a carefull enquiry into the crop situation in the entire tract rather than on the basis of the reports of one or two <u>patwaris</u> from a few disparate thanas or villages. As further evidence, in support of his argument, he said that that the trend of revenue collection in the permanent settlement areas had seldom shown any relationship with the natural calamities such as droughts or floods which were frequent in these

^{2.} Estimates of Area and Yield of Principal Crops in India, 1916-17; p.22.

^{3.} Report of the Royal Commission on Agriculture in India (Abridged Report), Bombay, 1928; p. 605. In Bihar, the <u>Patwaris</u> kept land records. The collusion between <u>Patwaris</u> and the Zamindars and the consternation of the district officials because of their failure to tame the <u>Patwaris</u> and wean them away from the Zamindars is a recurring theme of the official documents. Just for example one can look at A.P. Macdonnell, <u>Report on the Food Grains Supply and Statistical Review of the Relief Operation</u>.

^{4.} See (a) Report of the Indian Economic Enquiry Committee, 1925, Calcutta, 1975; Vol.I, p.17; (b) Final Report of the National Income Committee, February, 1959; (c) Islam(1978:20-22).

^{5.} In permanently settled areas the data is collected by the <u>Patwaris</u> and in some temporarily settled areas the data is collected by <u>Chowkidasr</u>; See Blyn(1966: 45).

^{6.} For these comments see (a) Estimate of Area and Yield of Principal Crop in India 1940-41; p.48; (b) R.S. Finlow in Royal Commission on Agriculture in India. Evidence taken in Bengal Presidency; Vol. IV, p.14; Bombay 1927; (c) Final Report of the National Income Committee, February, 1925; p.25.

areas. The revenue remission in those areas depended on factors other then the crop situation.

In Bihar, the crop statistics followed the following course 7.

"The <u>Chowkidar</u> gives a rough idea of acreage and production to the thanadar. The thanadar on receiving such statement from the village <u>Chowkidars</u> in his thana takes some sort of an average of them, not necessarily the arithmatic mean, using his own knowledge about the conditions of the standing crops which average was submitted to the District Officers through the sub-divisional officers. The District Officers similarly averaged the statement made by the thanadars. The average thus arrived at, which could be modified at the discretion of the District Officers, was being passed on to the Director of Agriculture......"

These <u>Chowkidars</u>, the primary reporting agencies, were low paid, ill trained and lacked orientation for his job. Further, as noted earlier, this job fell on him in addition to his official job of policing. In Bihar these <u>Chowkidars</u> were mostly the lowest castes. According to the government officials they were also either criminals or had criminal connections ⁸. Their low and uncertain income made them dependent on the rural gentry. Under the situation it is likely that his reporting of crop and production as well as the normal area of each crop, which he is supposed to estimate, would lack accuracy ⁹.

It would, however, be too fracile an argument to say that the biases in the reporting of crops lies solely with the lowly <u>Chowkidars</u>. On the other hand, a more plausible argument could be that with their intimate knowledge of the local condition, these native reporters were fairly accurate estimators of the crop condition. As we shall see below, the sources of biases in crop estimation lies elsewhere and at different level in the colonial administration.

Crop statistics in the British India were not accurate no doubt. The Indian Council of Agricultural Research found that in the period between 1944-49, the rice output in Bihar was under- estimated to the extent of 30 percent; and the major contributor to this error was the acreage estimation ¹⁰.

^{7.} Report on Crop Survey in Bihar (1944 to 1948) Patna, Bihar, 1950; p. 6.

^{8.} The official documents have frequent reference to this. For one specific comments on <u>Chowkidar</u> and the <u>Chowkidar</u> system by an anonymous observer, See,C.R.M.(1879:337-347)

^{9.} In Bengal at least Islam has shown how the official rule book added to the confusion. He pointed out two specific types of confusions created by official rule books: (1) By not specifically as igning to the chowkidar the task of data collection; (2) Further, by asking the later to estimate 'normal area' under each crop in his region, but without clearly defining what it meant by normal area.

^{10.} Blyn, (1966:12). He quoted from the Indian Council of Agricultural Research, <u>Sample Survey to the Estimation of Yeild of Food Crop</u>, 1944-49, 1951, pp. 39-42.

In 1944-45 P.C. Mahalanobis made a detailed survey of rice and few other crops in Bihar ¹¹. It was found that (1) the official estimates of areas under both <u>Bhadoi</u> and <u>Aghani</u> paddy given by <u>Season and Crop Reports</u> were underestimates; (2) the areas under the <u>Aghani</u> paddy given by Settlement Reports were underestimates; but the areas under Bhadoi paddy from the same sources were overestimates. (3) For cash crops such as sugarcane and potato, the official estimates were 91 percent and 115 percent respectively of the Mahalanobis estimates. But the areas reported by the Settlement Reports were underestimates for all crops ¹².

The Mahalanobis effort was followed by plot-to-plot survey by the Bihar Agricultural Department for three consequitive years from 1945-46. It was found that (1) the official estimates of area under foodgrain were mostly underestimates which ranged from 30 percent to 8 percent, except in case of area under barley in 1946-47 and 1947-49; and (2) the official estimates of cash crops such as sugarcane, potato and tobacco were overestimates.

These comparisons reveal only a haphazard picture, with no definite trend of either overestimation or underestimation.

The standard yield and condition factor are the two other most important elements in the crop estimation procedure. The standard yield multiplied by condition factor gives the average yield which is then used to estimate output by multiplying it with the area under crop. The standard yield is defined as "the average yield on average soil in a year of average character" ¹³. It is, the <u>Estimates of Area and Yield of Principal Crops</u> (henceforth <u>Estimates</u>) says, the frequently recurring normal crop in an area in a normal year ¹⁴. The average envisaged in the definition is not the mean, but the mode.

^{11.} Report on Crop Surveys in Bihar (1944-1948), 1950, Patna, Bihar, 1950; p.92, 102 and 103.

^{12.} For limitations of statistics of the settlement report, see Islam, (1978).

^{13.} The definition of standard yield of principal crops in India are worth quoting here: "Normal crop is that crop which past experience has shown to be the most generally recurring crop of the local area; the crop which the cultivator has a right (as it were) to expect, and with which he is (or should be) content, while if he gets more he has reasons to rejoice, and, if less, he has reasons to complain", or, in other words, it is "the figure which, in existing circumstances, might be expected to be attained in the year if the rainfall and seasons were of a character ordinary for the tract under consideration, that is neither very favourable nor the reverse". Estimate of Area and Yield of Principal Crops in India, 1916-17; p.21 and also in 1940-41.

^{14.} Estimate of Area and Yield of Principal Crops in 1916-17 p. 21. See also (1) Royal Commission on Agriculture in India, (Abridged Report) Bombay, 1928; p.608; and (2) Blyn (1966:24).

The condition factor is "a certain number of areas to represent the normal outturn, and estimate the outturn of the year of report as so many annas higher or lower than that of normal".

The <u>Estimate</u> prescribed the crop cutting method for estimation of the standard yield ¹⁵. The <u>Estimate</u> elaborates the method thus: Usually 1/10th of an acre of the tract where crop is being estimated is selected by a district officer, who then cut the crop, thrash it and weigh it to estimate the yeild. The process is usually repeated twice or thrice. This method has, in fact, a number of drawback as has been pointed out by a number of official sources (Hubback, 1921).(1) The coverage and the number of experiments were usually small ¹⁶.

2.2 Biases in Estimation

In the economic literature the source of thes bias has sought to be attributed to the subjectivisim involved in the selection of sample fields by the primary data collecting agents like the lowly chowkidars in the permanently settled areas. The other source of bias was said to be the inadequate number of experiments carried out by the official to estimate the yield rate. The superior officers did not stay in the field long enough to carry out enough number of experiments to neutralise the personal elements in the selection of the field.

But do these observations explain everything? Consider, for example, the data given in the Table 2.1.

The Settlement Report virtually reiterates the observations mentioned earlier on the crop cutting procedure and number of samples, the two possible sources of biases in its crop estimation ¹⁷. The Report pointed out that the areas selected by it for crop estimation include areas which were subjected to chronic crop failure as compared to that of Stevenson - Moore. This crop cutting experiment failed to take account of the failure of the crop sown and, therefore, tended to overestimate the yield rate. The Report pointed out

^{15.} In Bihar there is one indigenous method of crop estimation known as <u>Danabandi</u> (apprisement) system. It is used to estimate the rent. Under this system the tenant cut the thinnest portion and landlord the heaviest portion of the crop of the area, mix the two crop and weigh it to estimate the yield and fix the rent. See J.A. Hubback, <u>Sampling For Rice Yield in Bihar and Orissa</u>, Bulletin No.166, Pusa, 1927,

^{16.} See (1) Report of the Indian Economic Enquiry, Calcutta, 1925; Vol 1 p.19.(2) First Report of the National Income Committee, April 1951, p.19; (3) D.L. Majumdar, <u>Draft Report on Paddy and Rice</u>, 1939; pp. 83-84. (4) Final Report of the National Income Committee, February, 1954; p.27.

^{17.} Report on the Survey and Settlement of Gaya District; p.83.

that the difference between its estimate of yield rate and that of Stevenson-Moore's was due to this failure to take account of the failed portion of the crop in the sample fields ¹⁸.

Table 2.1
Estimated Yield Per Acre./in the specified years

Es	timated by	Year		Pa	ddy	8		Ra	abi	
			I	II	III	IV	I	II	III	IV
1.	A.P. Macdonnell	1876		12				10		
2.	G.A. Grierson	1893	10.8	8.6	7.2	6.2	5.1	4	4	3
3.	C.J. Stevenson	1895	14.15	12.93	10.96	8.63	8.61	7.67	7.67	4.31
	— Moore									
4.	Estimates from crop) forecast)	1912/13		15				12		
5.	Crop Cutting)	1916/17	15	13	12.5	12	10.5	10	10	10.5

Note: I: Jahanabad, Arwal and parts of Daudnagar thanas.

II: Nawada, Pakribarwan, Rajauli, Aurangabad and parts of Daudnagar thanas.

III: Sherghatti and Barchetti thanas.

Source: Report on the Survey and Settlement of Gaya District; p. 83.

The Settlement Report, however, does not make any attempt to explain the difference between yield rate estimated by it and the rate estimated by Grierson, or for that matter, the difference in the estimation made by Stevenson-Moore and that by Grierson. In the late 1880s, Grierson enquired into the conditions of Gaya peasants as a part of an overall study into the conditions of the poorer classes of this country and concluded that 75 percent of the holdings in Gaya did not support their cultivators ¹⁹. In 1893, after the publication of Grierson's Note, C.J. Stevenson-Moore, ²⁰ at the behest of the Government of India, undertook a study of the same region and concluded that only 45 percent, and not 75 percent as asserted by Grierson, of the holdings in Gaya district were unable to support their cultivators. Stevenson-Moore univocally admitted that the differences in their findings is pegged on their differences in the estimation of holding size and yield

^{18.} Report on the Survey and Settlement of Gaya District; p.83.

^{19.} Grierson (1883:95)

^{20.} See, C.J. Stevenson-Moore, <u>Report on the Material Condition</u> of the Small Agriculturists and <u>Labourers</u> in Gaya, Calcutta, 1899, especially p. 1 and 31. The Report contains details of the crop cutting experiment conducted by the auther.

<u>per acre</u> of the crops (Table I). The Government naturally accepted the findings of Stevenson-Moore and rejected Grierson's.Incidentally, there was nothing in Stevenson Morre's Report to show that his method of estimating the yield per acre was more reliable than that of Grierson.

One other example can be cited before making any definite observation about the method of yield rate estimation in Bihar and their reliability. This time it is from Sitamarhi sub-division of Muzaffarpur district in the second half of 1890s at the time of the land settlement of the sub-division and the settlement officer here incidentally was C.J. Stevenson-Moore ²¹. Stevenson - Moore writes:

"The produce per bigha has been invariably stated by the raiyats to be from 5 to 8 maunds at the most. This is absurd considering that the incidence of rent alone sometimes amounts to Rs.5; and expenses of cultivation varies from Rs. 1 to Rs. 2.5 From careful inquiries made the actual produce of land appears to be from 10 to 20 maunds a bigha according to the quality of soil, the average being 15 maunds a bigha".

The average reported by other assistant settlement officers working under Stevenson-Moore varied between 14 maunds to 17 maunds. Stevenson-Moore, who was then the settlement officer of Muzaffarpur finally accepted 15 maunds of cleaned rice as the average outturn. Earlier the Department of Land Records and Agriculture had rejected the results of crop-cutting experiments made between 1894-97 by the same set of settlement officials under Stevenson-Moore because it considered their results of 16 maunds of un husked rice i.e. 8 to 10 maunds of cleaned as yield per acre too low 22.

In Bihar, therefore, the elements of personal choices in the crop-cutrting method of estimation of yield per acre existed. But it would be improper to situate these biases in lowly Chowkidars or even from the manner of selection of sample field or by the number of experiments carried out by the field officials. The probability of bias was no less at the upper echelon of the colonial administration who often altered the estimation made by officials lower down and it is difficult to argue that such changes were made solely on considerations of statistical accuracy.

Besides this, one has to take cognizance of another aspect of the estimation process which is perhaps specific to the Bihar situation. In Bihar the random sampling method

^{21.} C.J.Stevenson-Moore, Final Report on the Survey and Settlement operations in the Muzaffarpur District, 1892 to 1899, Patna, Bihar, 1861; pp. 291-293.pa

^{22.} C.J. Stevenson-Moore, <u>Final Report on the Survey and Settlement Operation in the Muzaffarpur District</u>, p. 291.

for yield estimation, as suggested by the Agricultural Department and by the experts like Hubback (Hubback, 1921), could not be started before 1916-17²³. But even in 1916-17 the number of sample tests etc. carried out was too small to be incorporated in the Estimate Report of that year. In the years subequent to that also the results were unsatisfactory so that no revision in the yield rate in Bihar was possible for long. Hubback tried some experiments to perfect the method. But no effective infrastructure could be evolved to carry on the necessary experiments for an adequately scientific method of estimation till 1940-41, which is incidentally the terminal year of our study ²⁴.

In Bihar, as a result, the yield per acre was adjusted only occasionally despite the generally accepted suggestions made repeatedly in the Estimate that it should be changed at intervals of five years. For example, the standard yield per acre of the winter rice was lowered from 1,234 pounds per acre to 900 pounds only in 1920-21; and for the autumm rice from 823 pounds per acre to 741 in 1921-22 and then maintained unaltered. The yield rate of linseed was decreased from 492 pounds per acre to 370 pounds much later in 1925-26 and the rape and mustard was increased from 492 pounds per acre to 576 pounds in the same year in 1925-26. For linseed the next revision was in 1928-29 when it was raised to its earlier rate of 492 pounds per acre and rape and mustard was reduced to its 1924-25 level of 492 pounds per acre. The jute rate was raised from 1200 pounds per acre to 1333 lbs. In 1932-33 the yield rate of sugarcane was increased for the first time from 2460 pounds per acre in 1936-37 to 2912 pounds for North Bihar and then reduced to 2240 pounds in 1937-38 25. For the Chota Nagpur area a separate sugarcane yield rate was given from 1936-37. In 1937-38 the rate was reduced from 4480 pounds to 3136 pounds. These cases show that the adjustment in yield rates was hardly a regular feature in Bihar.

Under this situation the third estimator i.e. the 'annawari condition' assume greater importance. But as things stood at that time, this estimator was a visual one and, as Islam

^{23.} Quinquennial Report on the Average Yield per Acre of Principal Crop in India, 1916-17, Calcutta, 1919; p. 8.

^{24.} See various Estimate Report, but especially (a) Quinquennial Report On Average Yield per acre of Principal Crop in India for the period 1926-27, Calcutta; p.1. (b) Estimates of Area and Yield of Principal Crops in India, 1940-41, 43th issue pp. 48-49.

^{25.} Bihar was seperated from Orissa in 1936. The Yield rates before that are applicable to both Bihar and Orissa.

argued, all the arguments about the subjective elements affecting estimation of the earlier estimators were all the more applicable in this case (Islam, 1978: 32).

The first difficulty in this case arises from the interpretation of the concept itself. In some places 16 annas meant a bumper crop, and in other areas, it meant the normal crop. This makes the calculation of the condition factor difficult. ²⁶ Further, the number of annas taken to mean normal crop varied from 12 annas to 16 annas. ²⁷ In Bihar, for example, the normal crop is expressed by 12 to 14 annas: actually in 12 district, it was 12 annas; in 7 districts 13 annas and in 2 districts it is 14 annas. ²⁸

Various practices in the calculation of the anna estimates created problem (Blyn, 1966: 48). For example, the anna estimates were expressed usually to their nearest anna; e.g. 8 annas for 8.5. Usually there is preference for even number (Bowley and Robertson, 1934: 37). But this meant that the nearest anna would be out by as much as 5 anna, which is 6 per cent in 8.5 anna and 3 percent in 16 anna. Blyn, however, pointed out that this tendency did not affect the actual estimation as it tended to average out the biases because of the variation in the actual practices of estimation from area to area.

The other source of error is the "pessimism" of the village officials, whether it is the <u>Patwari</u> or the <u>Chowkidar</u>. These officials tend to overestimate in bad years and underestimate in good year. Blyn, however, tends to discount this as a source of bias in crop statistics. On the contrary, he argues, this tendency on the part of village officials acts as a sort of moving average and tends to tone down fluctuations. ²⁹

4.3 Literature on estimation process

These possible sources of biases in the crop statistics of British India have been the focal point of a wide ranging debate among the economic historians which has its ramification both outside and inside this country. In his study of Bombay and Punjab, Heston (1968: 303 - 332) argued that the initial upward and later downward tendencies

^{26.} See <u>Royal Commission in On Agriculture</u>. (Abridged Report) Government Central Press, Bombay, 1928; p.608.

^{27.} Estimate of Area and Yield of Principal Crops in India, 1916-17; p.21; also Royal Commission on Agriculture in India, 1938.

^{28.} See <u>Royal Commission on Agriculture in India</u>;1928 and also, <u>Final Report on the National Income Committee</u>, February, 1954.In Madras, Bombay, Bengal and Assam, the normal crop is 12 annas; in United Pronvince, the Pubjab and North West Frontier Province, 16 annas; in the Central Provinces and Bihar 13.3 annas.

^{29.} Blyn (1966:49) Also, <u>Final Report of the National Income Committee</u>;1954, p. 27; <u>Royal Commission on Agriculture in India</u>,1928,p. 608.

in the crop production in Blyn's analysis was the working of the condition factors, which, Heston argued, was more often than not manipulated under political pressure. Dewey (1974) argued that in Punjab the estimation of both the yield per acre ³⁰ and the condition factors were biased and these biases have affected Blyn's analysis also. In his critique, Mishra (Mishra, no date; Desai, 1978) has exposed the weakness of these arguments, ultimately underscoring the validity of Blyn's analysis ³¹.

In the case of Bihar, therefore, one can summarise the specific feature of the data collected thus: The Chowkidar or the Patwari in Bihar, as possibly elsewhere, may not be without biases. Their ideas about crop situation may have been surrogate to the idea of the rural gentry. But their native instinct about the local agricultural situation and their innate random method of estimation tends to neutralise, as Blyn would argue, the biases in their estimation to a large extent. Then the upper level of beurocracy had all the wherewithals to adequatly check over their estimates, as we have shown in our discussions of the estimation of the yield rate earlier. The higher officers have invariably corrected the yield rates upward 32. It is, in fact, these higher officials whose estimation had often been affected by considerations other than the accuracy of estimation. In case of Bihar (and till 1935 in case of Bihar and Orissa) at least, it should be noted in addition that the yield rates remained virtually unchanged. And as regards conditon factors, our detailed tabulation shows two things clearly: (1) The condition factor of the non food grain crops were generally higher than the food crop, except barley. (2) Further, there was no definite pattern in the change in the condition factor from one year to another till 1930s which therefore tend to average out the biases arising out of the subjective factors in the estimation by village officials. (2) From the thirties there was generally downword tendences, especially in case of the non food crop. 33

All these subscribe to the Blyn's (1966: 54 - 56) general argument that the crop statistics of British India by and large remainsunaffected and is useful indicator.

^{30.} Walter Neale also suggested the possibility of political pressure on crop estimation, See Neale (1962:45) pa

^{31.} See also in this connection, Bagchi (1972:93-111)

^{32.} For how Finlow tried to influence average output estimation in Bengal, See Report of the Bengal Paddy and Rice Enquiry Committee. Vol. II, Replies submitted by H.P.V. Townsend, Commissioner, Burdwan Diviion; p. 18.

^{33.} See in this connection Saith (1978) quoted in Mishra (no date).

Since his argument is extremely relevant to our work, we quote him here in some details from his works:

"Whatever the error, however, it is possible that the measured trend rates represented the actual change with perfect reliability. Three cases of them are conceivable. The first would be if the percentage of error or underestimation remained constant ever the period In this case the height of the trend line would be affected, but not the rate of change. The second would be the case where upward and downward actual fluctuation were moderated to have found unaffected by the reported statistics. The third case would be where the percentage error fluctuated over time in a random fashion above and below again leaving trend unaffected. It is possible, however, that the fluctuation in error was not self-cancelling overtime, and in this the extent of error may have an appriciable effect on the trend..... Over a half century period, an error distribution of the type appears quite unlikely".

In British India, Blyn says, in fine, it does seem that neither the degree of error, nor the likelihood of error distribution making for maximum biases, was sufficiently large to significantly effect the British India trend rates for aggregrate crops over the whole period.

The approach adopted by Blyn has been adopted by many. Thomas and Shastry (1939: 39) said that the errors were more or less systematic; the data, they added, might be inadequate for estimation of food availability but helpful for time series analysis. Panse (1952) argued that the primary reporting agencies had a tendency to overestimate in bad years and underestimate in good years and thus averaging out the biases over long period. Mukherjee (1965: 21) agreed the crop statistics can be used for long term analysis. Subramanium pointed out that the error of the statistics were systematic and have strong downward bias (1945: 25 - 26). It would, therefore, affect the height of the curve but not the rate of change. Islam accepted these arguments for crop statistics of Bengal till 1940-41 (Islam, 1972: 37). He,however,pointed out that the estimation after 1941 was substantially different from estimation before 1941.

2.4 On Islam's Estimation Method

Since Islam's study is very similar to us it might be useful to discuss his work in a little bit more detail and point out our differences. Islam's study covers the whole of Bengal which was part of the ertswhile Bengal Presidency and his period is 1920 to 1946. Our study, on the other hand, covers Northern districts of Bihar (north of the Bihar plateau) and covers a longer period of time from 1892 to 1941.

Our choice of 1892 as the starting year is dictated by the availability of data. This is the year from which systematic crop data with districtwise break-up began to be published for Bihar. Choice of 1941 as the end terminal year is affected by the consideration that it marks the point of virtual discontinuities in the data collecting system in Bihar under the colonial rule. Through the experiments of Mahalanobis ³⁴ in 1944 and that by the Agricultural Departments ³⁵ in 1945-46 to 1947-48, a new and more scientific system of data collection and estimation procedure based on the random sampling system was introduced in Bihar in the 1940s. This makes the crop data collected till 1941 and that after 1941 qualitatively different and the year 1941 a virtual point of discontinuition in the time series information on Bihar published by <u>Season and Crop Report</u> as also other official publications.

Our other point of difference is the approach in the method of revision of crop statistics. Islam's whole argument is based on his two observations (Blyn, 1966: 37): (1) The crop acreage of Bengal is on the whole underestimate. (2) But in case of some individual crops there are over estimation. This promted Islam to calculate the correction factor by using the one point estimation made by the Ishaque Report as the base, supplemented by the sample surveys and District Survey and Settlement Reports and then revise the entire series of crop statistics from 1920 onwards upto 1946 with the help of this correction factor. ³⁶

We do not find it feasable to follow Islam for the following few reasons: First our study covers a longer period as noted earlier. Second, in our case there is no Ishaque type plot to plot survey during the period of our study that would have enabled us to calculate the correction factor with reasonable reliability. As mentioned earlier, there are two Ishaque type intensive study reports on crop statistics in Bihar in the later half of 1940s which fall outside our terminal period of 1941. Further our submission in this respect is that it is not logically very sound method to calculate 'correction factor' on the basis of any one-point study at a period which falls outside the period of our study and then use that ratio to upgrade a historical series which goes as far back as to 1892. Also, and more importantly, our primary objective is to find out the <u>trend</u> of agricultural production in the North Bihar in the late nineteenth and early twentieth century. Over such a long

^{34.} Report of the Crop Statistics in Bihar (1944 to 1948)

^{35.} Report of the Crop Statistics in Bihar (1944 to 1948)

^{36.} Islam's main basis of calculation of correction factor is "Agricultural Statistic by Plot to Plot Enumeration in Bengal", 1944-45, Calcutta, 1946, popularly known as the Ishaque Report, supplemented by district survey and settlement reports, and the sample survey by the Indian Statistical Institute.

period, as we have pointed out earlier in this chapter, many of the biases and dificiencies in data collection tend to average out. Only plausible question that can be asked in this respect is that this might affect the calculation of availability of food which we would try to estimate in the next chapter. Our reaction to this question at this stage is that the study of famine, drought and other calamities that visited so frequently this part of the Bengal Presidency during the colonial period enables us to underscore far more effectively the problems of availability or, more appropriately perhaps, the non-availability of food grain to the people than through adjustment of crop statistics.

We have therefore decided to follow Blyn's argument about the biases in the crop data more than anybody else in our attempt at using crop statistics in analysing the <u>trend</u> of agricultural production in North Bihar during the colonial period without any Islamtype adjustment.

2.5 Coverage of the study

Our area of study is North Bihar. Till 1911 Bihar was part of the erstwhile Bengal Presidency. As we noted earlier, in April 1912 ³⁷ the territories of Bihar and Orissa was made separated from Bengal and in 1935, Orissa was separated from Bihar and the modern state of Bihar was born. This administrative adjustment, however, does not affect our geographical coverage of North Bihar. In geographic terms North Bihar in our case means Bihar plains i.e. by and large, the province of Bihar without the southern plateau region. The name of the administrative division and districts falling within this region are as follows: ³⁸

	Division	District
1.	Patna Division	Patna, Gaya and Shahabad.
2.	Tirhut Division	Saran, Champaran, Muzaffarpur, and Darbhanga.
3.	Bhagalpur Division	Monghyr, Bhagalpur and Purnea.

2.6 Data sources

For the district level crop statistics on Bihar we have drawn information from Agricultural Statistics for the Lower Provinces of Bengal for the information till 1900.

After 1900 our main source is the Season and Crop Report published by the Director

^{37.} The actual date is April 13, 1912.

^{38.} We have followed the survey and settlement report in spelling the names of places etc.in this work.

of Agriculture. These information were also published in the <u>Agricultural Statistics of India</u> by the <u>Department of Commercial Intelligence and Statistics</u>. Each issue of the <u>Season and Crop Report</u> contains (1) crop acerage for that year; (2) outturn for the current year and the previous year; (3) yield in percentage term for current year and the last year, (4) the condition factor and (5) the normal area cropped.

We have taken the acreage data for the current year and outturn and yield rate for the previous year from each issue of the <u>Season and Crop Report</u>. ³⁹ So in the later two cases at least any subsequent revision in the data is taken care of. In the case of acerage data we have another source of checking them in <u>Agricultural Statistics in India</u>, which, in fact, found to be the same revised information published later in the year. ⁴⁰

For the five years between 1905-06 and 1910-11 the outturn has been given in terms of percentage of normal yield of the district concerned instead of actual yield in tons as in other years. For these years the outturn has been estimated by using the normal estimation formula discussed earlier.

2.7 Classification of Crops

These crops can be classified either as commercial and non-commercial or as food crops and non-food crops. In the context of the North Bihar rural economy during the colonial period specially, the commercial and non-commercial classification posses problems of decision. For example, the food crop like wheat is produced primarily for marketing by the mainly rice eating poor cultivators of North Bihar. Further, exports were inadequate measure of commercialisation, as Blyn has pointed out: e.g. while only 1 percent of rice was exported almost a quarter of its output went to commercial establishment for milling. The gross village retention of these crop for seed and other purposes were also very high (Blyn, 1966: 80; Islam, 1978: 56).

Classification in terms of foodgrain and non-foodgrain is therefore, more meaningful in this context. In case of such classification the foodgrains would include bulk of the crops included in this study: eight out of thirteen crops except Sugarcane, Indigo, Jute, Til and Rape and Mustard. This classification enables as to obviate the difficulties mentioned above in connection with the commercial-non commercial classification.

^{39. &}lt;u>Season and Crop Report</u> follows agricultural calender, i.e. July to June; and Agricultural Statistics in India follows Calender year, i.e. January to December.

^{40.} See on this Islam (1978:45)

The conclusions of this chapter can thus be summarised:

- 1. The crop statistics during the colonial period is not strictly objective due to an inadequate system of data collection and also estimation process.
- 2. It affected the calculation of availability of food. But it can be used to find out the <u>trend</u> rate of the agricultural production for over such long period as fifty years. Over such long period the biases tend to average out.

Chapter III

TRENDS OF ALL CROPS, FOOD CROPS AND NON-FOOD CROPS

In the last Chapter we discussed the sources of the crop data of Bihar during the colonial period and their biases. In this chapter we will be using these crop data subject to the limitations already mentioned, to analyse the pattern of agricultural growth of the three divisions of North Bihar from 1892 to 1941.

There are number of studies of agricultural growth on the basis of the crop data during the colonial period ¹. We have, for example, Blyn (1966) and Bagchi (1982) dealing with regional development from the all India perspective and Islam (1876) and Mukherjee ² more specially focussed on the Bengal Presidency.

In his review of Blyn's work Dharm Narain summarised succintly the basic thrust of Blyn's argument (Narain, 1967: 359 - 360). Dharm Narain summarises Blyn thus: First, the all crop acreage grew at slow rate of 0.37; the population 0.67 percent. Second, the agriculture was, however, neither stagnant or unchanging. The change was reflected in the growth of non-food crop output at the rapid rate of 1.31 percent per year. Third, regionwise the slowest growing region was Greater Bengal and cropwise the slowest growing crop was rice though the stagnation affected other food crops also. The hard core of this malady resided in Bihar and Orissa region which was part of Greater Bengal. The slump in rice output was not only due to low yield per acre but also due to acreage shrinkage. Fifth, Blyn suspected the data on the yield rate and think that they were unreliable. But Dharm Narain argued that the yield data were not that bad. In fact, the decline in the productivity might have been not so much due to the faulty yield rate data as due to a) extant land tenure, on the one hand and, on the other, b) soil erosion, c) decaying irrigation supply and d) lack of manure.

Bagchi's framework is different though he incorporates most of these arguments. The focus of Bagchi's approach is colonialism and its impact on the regional development. His special emphasis on Eastern India, especially Greater Bengal, is subsumed within this broader frame of analysis.

^{1.} For the complete list, see Bagchi (1982); Kumar and Desai (1982); also Social scientist (1984).

^{2.} Mukherjee, S., Agricultural Marketing in a Colonial Setting; unpublished Ph.D. thesis.

Bagchi'sentire approach is predicated on his observation that the Britishers on the one hand introduced private property rights in land, and abolished slavery, and on the other hand, helped strengthened the forces of pre-capitalist relations like debt bondages (Bagchi, 1982: 87; 1972). On the one hand the market system was enforced from above and, on the other hand, the forces were released that strengthened the family labour based peasant farming.

These forms severely limited the possibilities of technological development. ³ As a result, the growth in population resulted in the lower productivity. The transfer of inferior and to the foodgrain production, specially rice, further contributed to the lowering of productivity. Thus the factors that affected population growth might also have been the factors that lead to lower productivity. The neoclassical or neo Malthasian paradigm with its emphasis on the causal relationship between population growth and productivity cannot explain this complex pattern. In its stead, Bagchi argues, attention should be directed to the analysis of factors that explain irrigation decline, soil erosion, inadequacy of fertiliser problems, salinity question, pestilence et. al. This inevitably turns one's attention, says Bagchi, to the state policy and the State itself which is in this case the colonial State.

The scholars have hinted that the basic malady for depressed agriculture in eastern India particularly during the last fifty years of colonial rule might reside in Bihar-Orissa region. One of the important objective of this and the next chapter is to subject this observation into quantitative assessment. The second hypothesis to be enquired into here is the observation made by Bagchi on the behaviour pattern of area and yield per acre, the two determinants of agricultural output: "If acreage remained stagnant", Bagchi argues, "then productivity per acre would have declined a little less than 1 percent per year: if acreage increased by a significant percentage, then productivity per acre would have declined even more drastically" (Bagchi, 1976b: 45). The third hypothesis to be tested is that the non-food grain crop production grew faster than the food grain crop. The point to be particularly enquired into is whether it has been achieved through higher

^{3.} Bagchi's theoretical framework has changed substantially from his <u>Private Investment in India</u> to his <u>The Political Economy of Underdevelopment</u>. For an understanding of this, **s**ee Bagchi (1976); also Bagchi (1982).

productivity per acre or through higher acreage. The fourth point of our enquiry is the availability of foodgrain to the people.

In this chapter we will discuss the growth patterns of aggregate all crops, food crops and non-food crop in North Bihar from 1892 to 1941. We also calculate the per capita availability of crops. In the next chapter we will deal with individual crops.

In this chapter we treat three broad categories - all crops, food crops and non-food crops separately. In each category we first deal with output, followed by our analysis of two of its determinants, acreages and the yields per acre. In each case we have first calculated the trend rate and then followed it up by the construction of index number for each quinquennium to find out the segmented growth of these three components.

The graphs of the moving averages for all the three series have been presented at the end.

In each table we have first given the rates of growth of North Bihar and its three component regions viz; Patna, Tirhut and Bhagalpur. Theorefically, a district level analysis might have been more revealing, but at this stage the data would have been unmanagable.

Following Blyin (1966: 82) and Islam (1978: 47) the trend rate has been calculated by fitting simple exponential equation of the type $Y = b^t$. The goodness of fit of these equations has been tested by calculating the t – values. As all these values were found significant they have not been dealt with in the text, but given in the Appendix.

For the study of the quinquennial growth we have constructed index numbers with 1920-23 as base. Islam has also used 1921-23 as base to construct his quinquennial index numbers. Blyn, however, followed a different course. Instead of constructing the trend rate for the entire series, Blyn first calculated crop trend rates for each overlapping segment of the series between population census years (e.g., 1891-01) and also between population mid-census years (e.g., 1896-06) and then took the average of the each of these different trend rates to get the rate for the entire series.

Fifty years of our study period have been divided into ten segments of five years each. A brief history of natural calamities having bearing on the crop production during the period is presented in the next page:

Table 3.1

	Period	<u>Incidents</u>	Area Affected
1.	1892-93 to 1896-97	Famine: 1891/92 and 1896	Muzaffarpur, Darbhanga Monghyr, Bhagalpur, Purnea.
2.	1897-98 to 1901-02	Deficient rain throughout; droughts: 1890 and in 1901/02	Biliar
3.	1902-03 to 1906-07	Flood: 1902/03; Drought: 1904/05 and 1906/07 (moderate); severe flood: 1906-07	Saran, Muzaffarpur, Darbhanga, Purnea.
4.	1907-08 to 1911-12	Famine: 1907/03; 1910/11; 1911/12.	Darbhanga
5.	1912-13 to 1916-17	World War I; Defective rain throughout; crop damages: 1912/13 and 1914/15.	
6.	1917-18 to 1921-22	War; Famine: 1918/19; influenza; "beri-beri".	Bhagalpur
7.	1922-23 to 1926-27	Post War recovery.	Bihar.
8.	1927-28 to 1931-32	Signs of depression.	Do.
9.	1932-33 to 1936-37	Depression.	Do.
10	. 1937-38 to 1941-42	World War II; famine	Bihar.

3.1 Trouds in all crop output

The combined trend rates of all crops of North Bihar and its three divisions of Patna, Tirhut and Bhagalpur have been shown in Table 3.2 along with the rates estimated by "lyn and Islam. The percentage share of the three divisions to total output in North Bihar have been added in order to bring out the relative importance of these divisions in the regional agricultural production. In order to compare these rates of growth with population growth, the geometric mean growth rates of population of North Bihar and its three divisions have been calculated and shown along with all crop growth rates.

The all crop production in North Bihar shows negative rates for the fifty years taken up in our study. (Table 3.2). This findings accord well with the trend rates of Greater Bengal calculated by Blyn. The two trend rates calculated by Islam, from official series and from his adjusted series respectively, however, shows positive growth rates for Bengal. This suggests that the downward pull to the long term growth rates of Greater agast partly and pull to the Bengal Presidency also

Table 3.2

Trends in All Crop Output

Region	Annu	al Percent	age	Percentage of total output	
	Gr	owth Rate	and the second s		
	Output	Popu	lation		
North Bihar	-0.4	2	.1	100.0	
Patna Division	- 0.5	3	.3	24.7	
Tirhut Division	- 0.2	2	.6	37.4	
Bhagalpur Division	- 0.5	2	.5	37.9	
	В	lyn's Esti	mate	Islam's Estimate	
	1	2	3	(1920 - 1946)	
British India	0.4	0.8	0.3		
Greater Bengal	-0.4	-0.4	-0.2		
Madras	0.9	1.7	0.4		
Punjab	1.6	2.2	1.3		
United Province	0.4	1.02	0.3		
Central Province	0.5	1.7	-0.6		
Bombay Sindh	0.7	0.7	0.8		
Bengal				0.9 (0.3)	

Note

- 1. Blyns and Islam's estimate have been added to the lower part of the table for comparison.
- 2. Figures in the bracket indicate rates of revised series in Islam's study.
- 3. In Blyn's series Nos.1,2, and 3 refer to 10 years reference decade rates, first 4 decade rates and last four decade rates respectively.

Source:

Blyn (1966: 119);

Islam (1978: 50).

included the South Bihar plateau and Orissa, we cannot say that this downward pull for Bengal Presidency as a whole originated only in the negative growth rates of North Bihar.

The rates of decline is slightly higher in Patna and Bhagalpur division, both being -0.5 percent. The rates of Tirhut division is still lower (Table 3.2).

The index numbers of all crop output reveal—a few further details of pattern of agricultural growth (Table 3.3). The first of these is that the all crop index declines in the second quinquennium. It is the period which falls immediately after the devastating famine of 1896 that affected virtually the whole of North Bihar (Table 3.1). Secondly, after the second quinquennium the crop index started rising reaching its peak in the five year period of 1907-08 to 1911-12 and thereafter falling, reaching its lowest level in the ninth quinquennium. In the last period it rose slightly. Further, the rates of decline, like the rates of increase in the pre-1907 period, are uneven.

The turning point in the agricultural production in North Bihar seems to be the half decade between 1907-08 and 1911-12. Till that period the crop production generally rose after a moderate dip in the second five year period despite frequent floods and droughts. But from the fifth quinquennium the crop output started declining and it continued through the depression till the second world war. Thus the inter-war period was the gloomiest period of the North Bihar agriculture.

In comparison, in Islam's study of Bengal which roughly covered the last four of our quinquennia shows a rising trend during the period though the ratestend to slow down towards the end (Islam, 1973: 50). The comparison with Blyn's study of Greater Bengal which include both Islam's Bengal and our North Bihar becomes somewhat difficult because of different methods of calculation adopted by Blyn. However, both the two sets of decadal rates (first four and last four) calculated by Blyn for Greater Bengal show negative growth rates (Table 3.2).

The divisional rates show some clear features (Table 3.3). First, in the first four quinquennia both the periodic trend and fluctuation pattern in Patna and Tirhut conform to the North Bihar pattern. The fluctuation is, however, different in Bhagalpur. Second, after the peak is attained in the fourth quinquennium in Patna and Tirhut and in the fifth in Bhagalpur, the indices show steady decline in agricultural production with a minor exception in case of Tirhut Division between 1922-23 to 1926-27. Third,

Table 3.3

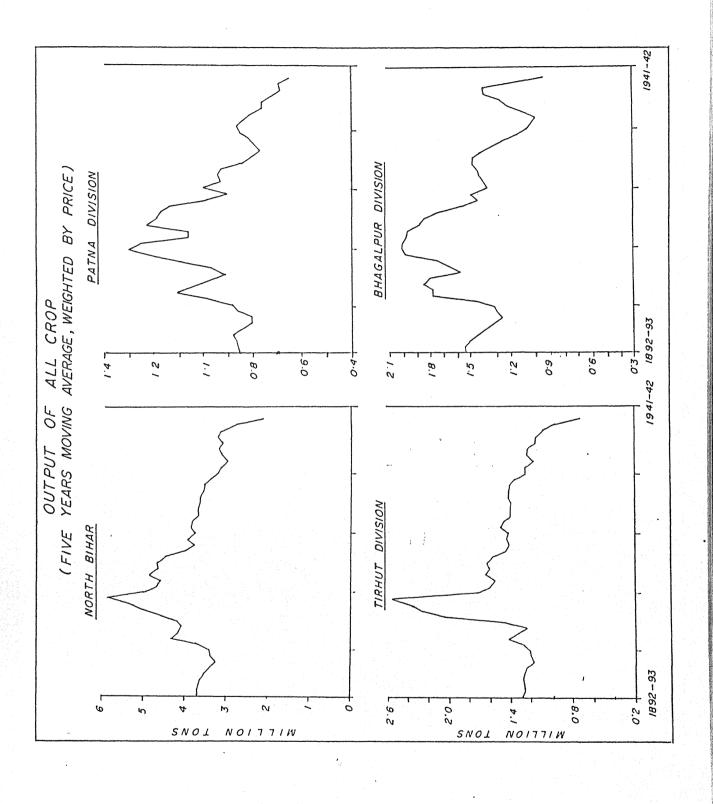
Index Number of All Crop Output

(base: 1921 – 23)

Year	1892-93	1897-98 1902-03	1902-03	1907-08	1912-13	1917-18	1922-23	1927-28	1932-33	1937-38
	to	0)	10	to	to	to	to	to	to	10
	1896-97	1901-03	1906-07	1911-12	1916-17	1921-22	1926-27	1931-32	1936-37	1941-42
North Bihar	95	8.4	111	133	123	10.4	100	93	62	81
Patna Division	68	82	117	118	118	102	, 96	78	80	29
Tirhut Division	98	62	93	151	108	66	100	97	83	73
Bhagalpur Division	109	91	125	124	142	110	103	93.	7.4	66
т сали ластандана жилен жасын такжа жасын жасын жасын айын таштан салыптын байтан алынан жасын жасын жасын жас	on as sequent a cut of the sequence of the second s	STORE THE STREET OF THE STREET OF THE STREET STREET STREET	- 3	ADDINE AND THE STREET STREET,		atorian ar tipareosa nemassa victoros se	THE SECTION SET SECTION ASSESSED.	ger praggagan sig rogen den e rejectifik enagan o	STATES OF THE SECOND STATES OF THE SECOND SE	Buthers and internal action desired in the contract that
				Table 3.4	3.4					
			Inde	x of Per Cap	Index of Per Capita Production	LI(

(base: 1921 – 23)

	AND THE RESIDENCE AND THE PROPERTY OF THE PROP		A THE RESIDENCE OF STREET, AND RESIDENCE OF STREET, ST	THE RESERVE OF THE PROPERTY OF						
Year	1892-93	1897-98	1902-03	1907-08	1912-13	1917-18	1922-23	1927-28	1932-33	1937-38
	to	10	0)	(0)	60	t0	to	to	to	to
	1896-97	1901-02	1901-02 1906-07	1911-12	1916-17	1921-22	1926-27	1931-32	1936-37	1941-42
	A THE RESERVE AND A STREET OF THE PARTY OF T					AND THE PROPERTY OF THE PROPER				A CONTRACTOR OF THE PARTY OF TH
North Bihar	96	87	111	128	117	102	97	88	84	73
Patna Division	82	62	112	113	115	101	95	81	7.1	51
Tirhut Division	06	84	96	144	107	66	100	9.4	75	09
Ehagalpur Division	0.2	09	78	119	130	106	92	86	99	53
	A STATE OF THE STA				e de de la completa del la completa de la completa del la completa de la completa del la completa de la completa de la completa del la completa de la completa del		AND THE RESIDENCE OF THE PERSON OF THE PERSO			



the rates of increase and decrease from one quinquennium to another throughout the fifty years of study are uneven.

The index of per capita crop production in North Bihar shows similar pattern as the index of crop production of North Bihar as a whole (Table 3.4). First, after a fall in the second five-year period, the index show rise reaching its height in the quinquennium 1907-08 to 1911-12. It falls steadily after that.

In terms of per capita production no division conform to the provincial rates. For example in case of Patna and Bhagalpur divisions the index numbers after a fall in the period 1897-98 to 1901-02, reached their peak in the quinquennim1912-13 to 1916-17 and then they fell steadily. For Tirhut division the turning point in the per capita crop production is the period between 1907-08 and 1911-12.

3.2 Trends in food grain output

Trends in foodgrain output of North Bihar are negative over the last fifty years of the colonial period. It fell little less than 1 percent annually (Table 3.5). Blyn's calculation of the annual percentage rate of Greater Bengal shows similar negative trend, the actual rate being 0.7 percentage, 0.2 percentage point less than ours. The study of Islam on Bengal proper shows positive growth for official series and no change for adjusted series. All these strengthens our earlier observation regarding the downward pull of North Bihar on agricultural growth of greater Bengal. The foodgrain output rates of the region seems to have exerted even stronger downward pull than the all crop output trend rates.

The divisional trend rates fluctuate around the North Bihar rates. The annual percentage growth rates of Patna and Tirhut division are somewhat less than that of North Bihar. But the trend rates of Bhagalpur far outweigh other divisional rates and also the trend rates of North Bihar and obviously pull the later down (Table 3.5.).

The quinquennial indices of foodgrain output show almost the same pattern as the all crop production. As for North Bihar, the index falkin the second quinquennium and then rises to reach its peak in fourth quinquennium. After that it falls steadily from one period to the other (Table 3.6). Further, the rates of increase or decrease between quinquennia fluctuate frequently.

Patna and Tirhut division indices by and large follow the North Bihar pattern (Table 3.5). After decline in the second quinquennium the indices show rising tendencies reaching their peaks in the fourth quinquennium. And then the indices fall steadily.

Table 3.5

Trends in Foodgrain Output

Region		ial Percenti rowth Rate	_	Percentage of total output
	Output	Рори	lation	
North Bihar	- 0.9	2	.1	100.00
Patna Division	- 0.8	3	.3	28.94
Tirhut Division	- 0.5	2	.6	42.77
Bhagalpur Division	- 1.6	2	.5	28.29
	I	3lyn's Esti	mate	Islam's Estimate
•	1	2	3	(1920 - 1946)
British India	0.1	0.6	0.3	
Greater Bengal	- 0.7	- 0.02	- 0.6	
Madras	0.4	1.47	0.2	
Punjab	1.1	1.9	0.9	
Central Province	0.4	1.2	-0.2	
United Province	0.3	1.2	- 0.2	
Bombay Sindh	0.3	0.3	0.4	
Bengal				0.7 (0.0)

Note

- : 1. Blyns and Islam's estimate have been added to the lower part of the table for comparison.
 - 2. Figures in the bracket indicate rates of revised series in Islam's estimate.
 - 3. In Blyn's series Nos.1,2, and 3 indicate 10 years reference decade rates, first 4 years rates and last four years rates respectively.

Source :

Blyn (1966:99);

Islam (1978: 54).

Bhagalpur division shows greater fluctuations. It reaches the peak during 1902-03 and 1906-07 (Table 3.6).

The question of per capita foodgrain output is associated with the question of availability of per capita food. The availability of per capita food at any particular time depends on the net crop output (i.e. gross output minus crop preserved for seed etc.) and population and the net trade flow (i.e. trade net of export and import into the region).

Statistics of trade from the presidencies are available from 1871 onwards. But the information on trade from inland areas like Assam, Bihar, Orissa to the port cities are available only from 1925-26. Further, no data available on the trade carried through train and river. 4

How does it affect the calculation of availability of foodgrain? It depends on the importance of trade in the rural economy in the region. The Bihar Banking Enquiry Committee ⁵ estimated that less than 2.5 percent of the total rice output were marketed in Bihar. Further, 22 million out of 32.5 million ordinary cultivators did not market their rice crop at all and the rest marketed an insignificant portion of their surplus rice in the village market. As for other commodities the percentages of export and import were the following: for Gram it was 8 percent and 2 percent respectively; for other crops 7 percent and 3 percent; for oil-seeds 25 percent and 6 percent. Only major export crops were jute, tobacco and sugarcane. These calculations were based on the trade statistics of 1917-25. But little have happened thereafter in the region to basically change the situation.

Two things are, therefore, clearly deducible from the above: First, only an insignificant portion of foodgrain was marketed in the rural area of North Bihar. Under the situation it can be safely assumed that at any particular year the foodgrain produced can be taken as a fair index of foodgrain availability to the people and the impact of the net trade on the food availability can be ignored in the calculation of the food availability.

Such a situation enhances the importance of population number at a particular point and its growth trend on the current availability of foodgrain per capita and its future prospect. On this North Bihar is adversely placed. Its trend of all crop production was -0.4 per cent over fifty years. Its population during the period grew by 2.1 percent (Table 3.2). The situation was worse in case of foodgrain. It had declined faster (at the

^{4.} On this Islam (1979:56)

^{5.} Report on the Bihar and Orissa Provincial Banking Enquiry Committee (1930: p. 59).

rate of -0.9 per cent annually) leading to quicker shrinkages of availability of food to its population (Table 3.5). The situation in the division is hardly any the better. In fact, it is worse in the division of Bhagalpur (Table 3.5.)

Table 3.7 gives the index of per capita availability of foodgrains for North Bihar as well as three divisions of Patna, Tirhut and Bhagalpur. North Bihar shows two specific features: First, the index—of foodgrain availability falls in the second quinquennium to rise in the next reaching its peak in the fourth. After that it—is steady decline touching its depth in the last quinquennium.

As for divisions, Patna and Tirhut reflect—the provincial pattern not only in the fluctuations of food availability but also in the movement of rates. The division of Bhagalpur does not conform to this pattern. In this division the fluctuations in the availability of foodgrain as well as its rates of change are more irregular.

Thus the food availability is dependent on two immediate features: the foodcrop production and population growth. With the population growing faster than the food production and the food production actually declining, the food availability became poignantly smaller in North Bihar as the twentieth century rolls into its fourth decade.

The crucial period is the fourth and fifth quinquennia i.e. the period between 1907-1917. It is from this decade that the food situation became increasingly worse. Also, it is in this decade and the decade earlier that the famine and other natural calamities became increasingly frequent (Table 3.1). Incidentally, the Table-1 shows the list of only officially declared natural calamities. It does not show many localised floods and droughts which were not officially proclaimed to be so though its effect on the local population and production was no less calamitous.

Prior to the turing decade between 1907 and 1917 the two major reported calamities were 1896 famine and 1905 floods that affected different areas of North Bihar. The all pervasive famine in North Bihar in 1896 came as a sequel to series of inadequate and irregular monsoon in the preceeding years and the failure of August rain in that year. The crop was damaged. In the earlier years unabated export of grain from the presidencies despite production shortfall had dried up the food stock (Bhatia, 1967; 238-259). The foodgrain became scarce; the local prices soared beyond ordinary means.

Table 3.6

Quinquennial Index of Foodgrain Output in North Bihar

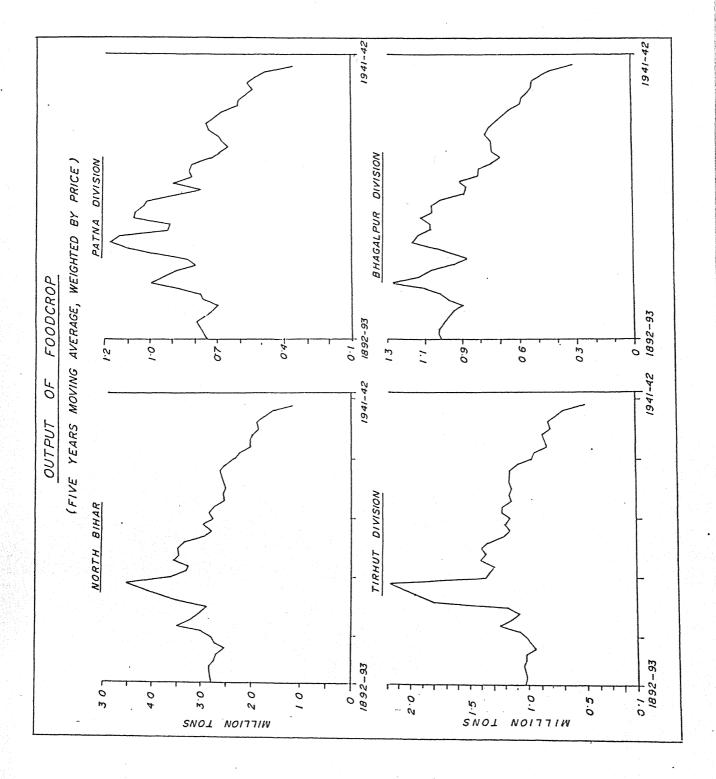
(base: 1921 - 23)

Voor	1802-03	1807.08	1807-08 1009 03	1007.09	1019 13	1017.19	1099,93	1097,98	1030,93	1937-38
l call .	1002-2001	06-7601	1302-00	1907-00	1317-10	01-1101	1322-23	1361-60	100-200	00 1001
	to	10	to	to	to	to	to	to	to	(0
	1896-97	1901-02	1906-07	1911-12	1916-17	1921-22	1926-27	1931-32	1936-37	1941-42
									And the second s	To add the property of the same of the sam
North Binar	35	28	115	133	7.1.1	102))	O S	0	60
Patna Division	83	84	120	122	118	102	95	85	73	62
Tirhut Division	86	62	86	156	111	101	100	97	70	63
Bhagalpur Division	114	102	134	113	126	102	82	86	29	51
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				Table 3.7	2.7	, .				
				AGUAN						
		Den Contt	Dan Canta Ontarional India of Boodemin Ontant in North Bihar	College Acres 61	Poodernin Or	Mortin Mort	h Eihar			

Per Capita Quinquennial Index of Foodgrain Output in North Bihar

(base: 1921 - 23)

	- man on coming bande in the Vertical Control Control Control to the Control C	THE CASE OF THE PROPERTY OF TH								
Year	1892-93	1897-98	1902-03	1907-08	1912-13	1917-18	1922-23	1927-28	1932-33	1937-38
	to	to	to	to	to	to	to	60	to	to
	1896-97	1896-97 1901-02	1906-07	1911-12	1916-17	1921-22	1926-27	1931-32	1936-37	1941-42
	The second secon			reference and the state of the	THE RESIDENCE OF THE PARTY OF T					The second secon
North Bihar	94	88	113	129	114	101	93	98	82	58
Patna Division	83	80	114	117	115	101	95	81	65	48
Tirhut Division	86	83	98	150	109	100	66	66	99	53
Bhagalpur Division	71	63	81	110	119	101	81	82	61	33
						to an administration and consideration of the second contract of the		emperatura de miser de distribución de servicio de servicio de servicio de servicio de servicio de servicio de		



In Bihar in the Shahabad districts for example, the daily labours and the village artisans became jobless.⁶ The report from other districts echoes the same: The landless, the artisans and the tenants, particularly lower castes, thronged the poor relief centres. The reports from other parts of North Bihar showed the same pattern. The wages did not rise; the employment fell as the cultivators had no work to offer. The crime and desertions became rampant.

In 1905-06 the floods affected the <u>Bhadoi</u> crop and the <u>Aghani</u> crop in the Districts of Darbhanga. In 1908 and 1909 the crop was damaged again by drought in the district. The trade with adjoining districts had eroded the district's food stock. The price rose. All these affected the availability of food. In Darbhanga and Bhagalpur the landless labourer and the rural middle class were the hardest hit.⁷

The famine of 1918-19 was a repeat story except that it was more widespread and it was followed by widespread pestilence and disease that took heavy toll of life.8 Scant rainfall at the beginning, excessive rain in the middle and abrupt cessation at the end of the year destroyed the entire crop of the year for the whole of North Bihar, but specially in the district of Patna and Bhagalpur and also Monghyr.9 The influenza and 'beri-beri' broke out. But the local trading continued forcing up the prices of commodities in the local market.

This detour into the discussion of famine is not to reiterate the famine history of North Bihar, but to highlight two things: First the uneven rain, excessive rain and scanty rain, any one of these or all togather can lead to drop in foodgrain production and consequent famine. And, second, the class most affected by this are the landless, the disposed peasantry and the vast poor tenants. Table 3.7 on per capita availability of foodgrain fails to bring these aspects out.

3.3 Trends in Non-food grain output.

The annual percentage growth rate of North Bihar shows positive trend (Table 3.8) as compared to the growth rate of food crop which is negative (Table 3.5). The

^{6.} Appendix to the Report of the Indian Femine Commission, 1898; Minutes of Evidence etc; Vol-I. Bengal; London, 1879; especially pp. 29 to 75 and 165.

^{7.} Answers to the Famine Enquiry Commission; Extract from the Government of Bihar, Revenue Department, Land Revenue Branch, File No., Fam. 1/44, Deposit; December, 1945.

^{8.} See the answer to the question No.1 of the Famine Enquiry Commission in the Extracts from the Government of Bihar, 1945.

^{9.} Extracts from the Government of Bihar, December, 1945.

Table 3.8

Trends in Non-Foodgrain Output

Region		l Percenta wth Rate	ge	Percentage of total output
	Output	Popul	ation	
North Bihar	1.0	2.	1	100.00
Patna Division	1.1	3.	3	10.30
Tirhut Division	1.1	2.	6	19.63
Bhagalpur Division	0.9	2.	5	69.86
	Bly	n's Estir	nate	Islam's Estimate
	1	2	3	(1920 - 1946)
British India	1.3	1.6	1.1	
Greater Bengal	0.2	0.5	0.5	
Madras	2.4	2.9	1.3	
Punjab	2.4	1.7	1.8	
United Province	1.4	1.3	1.4	
Central Province	1.0	3.1	- 0.8	
Bombay-Sindh	1.4	2.8	1.8	
Bengal				1.5 (1.3)

Note :

- 1. Blyns and Islam's estimate have been added to the lower part to the table for comparison.
- 2. Figures in the bracket indicate rates of revised series in Islam.
- 3. In Blyn's series Nos.1, 2, and 3 indicate 10 years reference decade rates, first 4 decade rate and last four decade rates respectively.

Source :

Blyn (1966:112);

Islam (1978:61).

non-foodgrain trend rate of greater Bengal estimated by Blyn was much lower than the annual percentage rates of North Bihar. On the other hand, the estimation by Islam on Bengal, for both official and revised series respectively, were higher than that of North Bihar. Thus, at least in the production of non-foodgrain crops, the malady of greater Bengal agriculture seems to lie possibly more in the regions of south Bihar plateau and Orissa than in North Bihar.

As for divisions, both Patna and Tirhut divisions have identical growth rates and they are higher than the North Bihar rates (Table 3.8). On the other hand Bhagalpur division shows growth rate lower than the region and other divisional rates.

As for quinquennial indices of non-foodgrain crops (Table 3.9) North Bihar shows the following features: First, The period between 1911-12 and 1916-17 may be termed as the turning period for the cash crop production in North Bihar. Second, the second quinquennium, i.e. 1897-98 to 1901-02, the period immediately after the 1896 famine, is the worst five-year period for the cash crop production in North Bihar. Third, the series shows high degree of fluctuations: The rates of increase and decrease show high degree of variation.

Patna division has two high points of growth: one in the fifth quinquennium and the other in the ninth. Also, it has two lows in the second quinquennium and in the seventh quinquennium. The fluctuations are high. Tirhut division shows different pattern. Its high points are fourth and the ninth quinquennia. Its low points are the second and the sixth. In the pattern of variation in the indices, this division shows high degree of variation like Patna division and North Bihar. Bhagalpur division matches by and large with Patna division and North Bihar in the pattern of variation in indices. Only thing to be noted is that the fluctuations of rates in this division are higher than that of other divisions and the region.

A general observation can be made here about these quinquennial rates: First, the second quinquennium between 1897-98 to 1901-02, is bad for cash crop as well as for food crop production for North Bihar and all its divisions (Table 3.5 and 3.8). This five year period is the period of deficient rain and recurrent drought and the 1896 famine falls withen this quinquennium, which adversely affected the cash crop also. (Table 3.1). Second, the fourth and the fifth quinquennia, i.e. the decade between 1907 to 1917, were good for the cash crop and the period between 1907-08 to 1911-12 for food crop

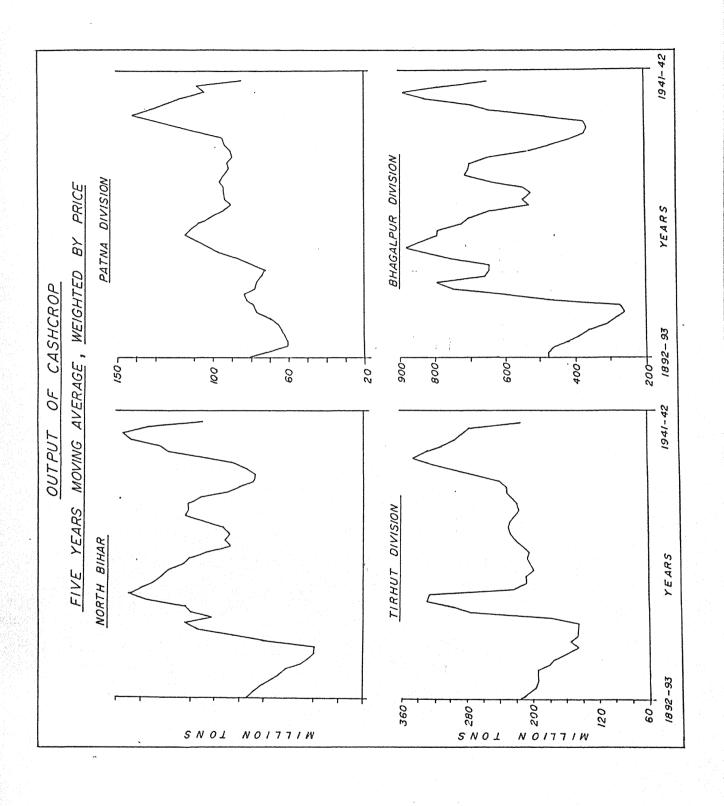
Table 3.9

Quinquennial Index of Non-Foodgrain Output in North Bihar

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, , , , , , , , , , , , , , , , , , ,	1899.93	1,897-98	1902-03	1907-08	1912-13	1917-18	1922-23	1927-28	1932-33	1937-38
rear	to to		to	to	to	to	to	to	to	1041 42
	1896-97	1901-02	1906-07	1911-12	1916-17	1921-22	1926-27	1931-52	10-0081	75-13-07
North Bihar	06	69	88	123	135	106	118	26	-104	152
Patna Division	82	68	87	08	115	98	66	92	142	111
Tirlint Division	89	77	64	116	89	හ	96	26	140	123
Bhagalpur Division	92	65	66	134	161	116	132	97	81	173
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				Table 3.10	3.10					
		Per Capita (Per Capita Quinquennial Index of Non-Foodgrain Output in North Bihar	Index of No	on-Foodgrain	Output in N	forth Bihar			
(hase · 1921 – 23)										

Year 1892-93	The second secon	THE R. P. LEWIS CO., LANSING MICHIGAN AND PROPERTY AND PR							
	1897-98	1902-03	1907-08	1912-13	1917-18	1922-23	1927-28	1932-33	1937-38
0)		to	to	to	to	to	to	1000	1041 40
1896-97	1901-02	1906-07	1911-12	1916-17	1921-22	1926-27	1931-32	1950-57	1941-47
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107	81	96	121	137	111	123	66	66	160
NOTHE EDITOR	67	Ø:	81	115	66	101	91	131	88
	5		. O	0.1	95	101	100	153	119
Tirhut Division	94 4	<i>))</i>	O	4	1 0	1.49	101	አ ጉ	193
Bhagalpur Division 66	47	89	149	170	125	7.77	101		



production in North Bihar and its divisions. The last decade of our reference period, i.e. between 1932-1942, is also good for cash crop production except for Bhagalpur division. Third, in the period between 1907 and 1917, the Indigo crop virtually fell out of production following the collapse of international indigo market with the discovery of synthetic dye and the sugarcane slowly crept into its place. Further, the depression seems to have less effect on cash crop production in North Bihar.

The per capita quinquennial non-food grains output in North Bihar (Table 3.10) shows two clear peaks: one in fifth quinquennium and the other in the tenth. The war time boom is higher than that between 1911-12 to 1916-17. On the other hand, it has two lows in the second quinquennium and in the ninth and the low in the second quinquennium is the lowest depth of cash crop production (Table 3.10).

The divisional rates do not conform to the regional pattern. In Patna division the index numbers fluctuated every alternate period reaching the highest peak in the ninth quinquennium. But in the tenth quinquennium it fell sharply again. The other two divisions show different pattern. Their only similarities are in the irregular variation in their indices and in the rates of change. These are the two division in which the jute crop and indigo (till 1910s in Tirhut division), constituted important components of cash crop which possibly explain their sharp fluctuations.

3.4 Trends in all crop acreage

The trend rates of all crop acreage in North Bihar in the period between 1892 and 1941 show a decline (Table 3.11). This decrease is a little less than the decrease in output. Blyn's estimate of trend rate of growth of area under all crop in Greater Bengal during the period shows all most no change. For the first four decades, however, Blyn's estimate shows slight negative growth rate for all crop acreage in greater Bengal. It is in the last four decades that the growth rates of all crop acreage in greater Bengal changed to positive in Blyn's estimates. On the other hand, Islam's study of Bengal proper from 1920 to 1945 shows positive trend in growth of all crop output for both the official and adjusted series (Table 3.11).

This, therefore, shows the downward pool of North Bihar in the growth of acreage under various crops in greater Bengalin the late nineteenth and early twentieth century. Prior to any definitive observation on the effect of this region on the agriculture

Table 3.11
Trends in All Crop Area

Region		al Percentag owth Rate	e	Percentage of total output
A. A	Output	Popula	tion	
North Bihar	- 0.3	2.1		100.00
Patna Division	-0.2	3.3		29.6
Tirhut Division	- 0.02	2.6		39.4
Bhagalpur Division	-0.8	2.5		30.9
	В	lyn's Estima	ate	Islam's Estimate
	1	2	-3	(1920 - 1946)
British India	0.4	0.6	0.3	
Greater Bengal	- 0.06	- 0.2	0.3	
Madras	0.3	0.5	0.2	
Punjab	1.0	1.8 •	0.4	
United Province	0.4	0.8	0.3	
Central Province	0.3	0.6	0.07	
Bombay-Sindh	0.4	0.5	0.4	
Bengal	andria (1906) Principal (1906) Principal (1907)			0.9 (0.2)

- 1. Blyns and Islam's estimate have been added to the lower part to the table for comparison.
- 2. Figures in the bracket indicate revised series of Islam.
- 3. In Blyn's series Nos.1, 2, and 3 refer to 10 reference decade rates, first 4 decade rates and last four decade rates respectively.

Source :

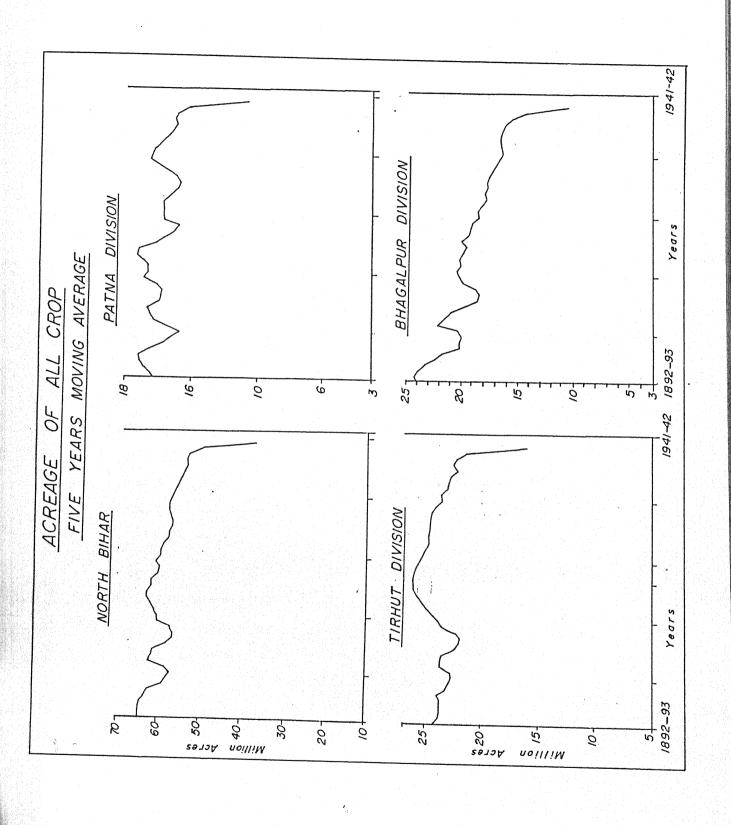
Blyn (1966: 131-132);

Islam (1978:65).

Table 3.12 Index Number of All Crop Acreage

(base: 1921-23)

	0000		000	100	1010	1017.19	1099-93	1927-28	1932-33	1937-38
Year	1882-93	-	1902-03	1807-08	1912-10	01-/161	1022-20	02 1701	7)
	to	to	to	to	to	to	to	01	9	3
	1896-97	1901-02	1906-07	1911-12	1916-17	1921-22	1926-27	1931-32	1936-37	1941-42
			AND THE PROPERTY OF THE PROPER	ennuori varamai eselimentei ejedisenteida eselektria eta deleta eselektria eta eselektria eta eselektria eta e	de madrialistica e cara processor de arresta de como de característico de la processor de como	AND AND THE PROPERTY OF THE PARTY OF THE PAR		A A MARINE DE L'ANNO DE L'	AND THE PROPERTY OF THE PROPER	and the state of t
North Bihar	105	66	101	93	102	66	96	94	06	98
Dofna Division	104	103	105	102	108	96	66	66	100	95
ratha Diriotor	οσ	80	10	χ π	96	100	96	76	88	98
TITRUL DIVISION			() () () () () () () () () ()				<i>y</i> 0	08	98	80
Bhagalpur Division	124	109	113	က က	100	TOT	;; ;;))
		autocomprenderselselselselselselselselselselselselsels		kai talkain nastasuun seesassa suurin ja talkain saksin ja saksin ja saksin ja saksin ja saksin ja saksin ja s		Conference de la marcia della d	CONTRACTOR	STALLEN CONTROL OF THE STATE OF		



of Bengal Presidency, however, one has to enquire into the state of agriculture in Bihar plateau and Orissa.

Bhagalpur division shows higher negative rate of growth during the period. On the other hand, the other two divisions of Patna and Tirhut show negative trends which are lower than the regional rate. The Tirhut division, 0.02 percent, in fact, shows almost no change (Table 3.11).

Coming to the five yearly growth rates, the indices of acreage of all crops output show the following (Table 3.12): (1) The peak period in the growth of all crop acreage is the first quinquennium, i.e. 1892-97. (2) The next peak is the fifth quinquennium, i.e. 1912 to 17. (3) In between the first and fifth quinquennia the crop acreage fluctuated moderately from one quinquennium to the other with a generally decreasing trend. (4) After the quinquennium of 1912-17 the acreage declined steadily.

Pattern of acreage growth in the divisions has both similarities and dissimilarities with the North Bihar pattern. (Table 3.12). Bhagalpur division by and large conformato the provincial pattern. For Tirhut division, the specific feature is that the acreage growth reaches its peak, and its highest peak at that, in the sixth quinquennium unlike North Bihar and other two divisions. (Table 3.12). The indices of Patna division show somewhat different pattern. After a slight fall in the sixth quinquennium the acreage in the division of Patna shows marginal rise to fall again, 5 percent, in the last quinquennium.

Three observations, therefore, stand out clearly from the above: (1) The annual percentage growth rate of crop acerage shows that the crop acreage in North Bihar has generally fallen in the period between 1892 and 1941. (2) The five yearly rates show fluctuations within this generally declining tendency. One can identify the fifteen years between 1907 and 1922 as the period of highest utilisation of available area for cultivation in North Bihar. (3) There are considerable variations between divisions.

3.5 Trend in foodgrain acerage

The annual percentage growth rate of foodgrain acreage of North Bihar shows negative rate during the period (Table 3.13). The rate is higher than the all-crop rate (Table 11). During the same period Blyn's estimation, 0.0 percent, shows no change. In Blyn's estimate the first four decade trend rate is negative, and the last four decade trend rate is low but positive. The two tendencies thus neutralised each other. Islam's study of Bengal covering twenty six years from 1920 to 1946, however, shows positive

Table 3.13

Trends in Foodgrain Acreage

Region		al Percentag owth Rate	c	Percentage of total output
	Output	Popula	tion	
North Bihar	- 0.5	2.1		100.00
Patna Division	-0.3	3.3		28.94
Tirhut Division	-0.1	2.6		42.77
Bhagalpur Division	- 1.03	2.5		28.29
	В	lyn's Estim	ate	Islam's Estimate
	1	2	3	(1920 - 1946)
British India	0.3	0.3	0.4	
Greater Bengal	0.0	-0.1	0.3	
Madras	0.04	0.3	- 0.03	
Punjab	0.9	1.7	0.4	
United Province	0.4	0.7	0.3	
Central Province	0.4	0.7	0.3	
Bombay-Sindh	0.3	0.2	0.6	
Bengal				1.0 (0.2)

- : 1. Blyns and Islam's estimate have been added to the lower part to the table for comparison.
 - 2. Figures in the bracket indicate rate from revised series of Islam.
 - 3. In Blyn's series nos.1, 2, and 3 indicate 10 years reference decade rates, first 4 decade rates and last 4 years rates respectively.

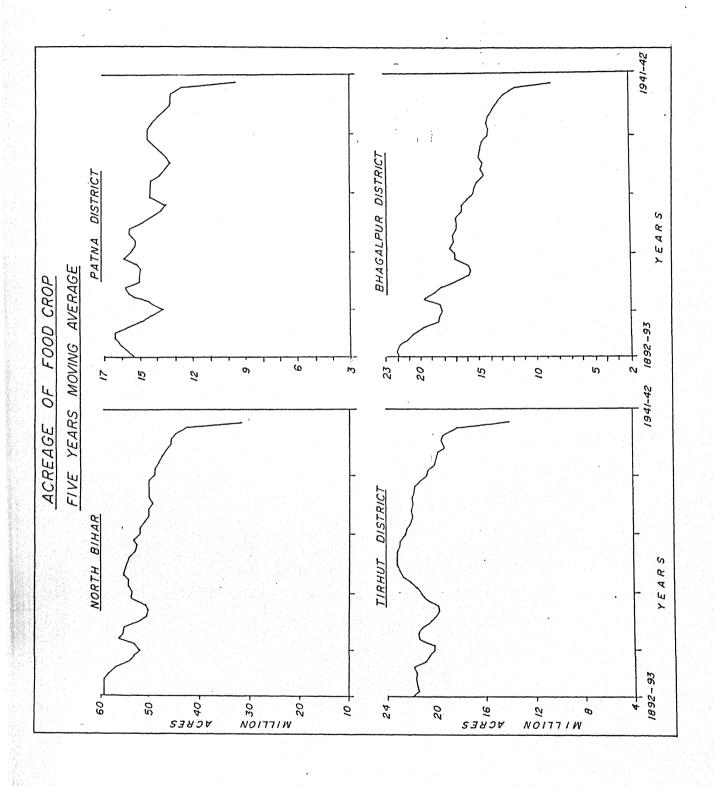
Source:

Blyn (1966: 131-132);

Islam (1978:70).

Table 3.14 Index Number of Foodcrop Acreage

(base: 1921-23)					de price access many regist about members and many access and many control access and ac					
Year	1892-93 to 1896-97	1897-98 to 1901-02	1902-03 to 1906-07	1907-08 to 1911-12	1912-13 to 1916-17	1917-18 to 1921-22	1922-23 to 1926-27	1927-28 to 1931-32	1932-33 to 1936-37	1937-38 to 1941-42
				er a compression a particular de l'acceptant de l'a	er mennen Verlandsplanten mellen er er in genemmen eine Oppisa en bank in erne in die die	en en en servicio de l'anche de descriptor en estato e servicio de la competito de descriptor de la competitor				
Moselly Dillion	109	103	104	95	103	66	95	8	06	84
Notice Differ	107	106	108	105	107	96	86	96	86	91
Patna Division)))			100	96	94	87	84
Tirhut Division	93	92	92	18	76)		· (
Bhagalpur Division	134	117	118	66	107	100	87	06	00 00	<u> </u>
					A CONTRACTOR OF THE PROPERTY O		and the second s			
The first indicate the second of the second										



rate both for the official series and for his own adjusted series. This thus suggests the negative impact of North Bihar, as also other parts of Bihar and Orissa not covered here, on the trend of growth of acreage of the erstwhile Bengal presidency. The rates of decline in Patna and Tirhut division are less than the regional rate. But the rate of decline in Bhagalpur Division is considerably higher than the regional rate and the rates of other divisions.

The index number of food crop acreage shows that the period 1912-17 is the turning period in the growth of North Bihar food crop acreage (Table 3.14). Prior to that the acreage fluctuated somewhat from one quinquennium to the other. After the 1912-17 period, however, the acreage fell steadily.

The situation in the division reflects by and large the situation in the region (Table 3.14). For both Patna and Bhagalpur divisions the turning period is 1912-17 i.e. fifth quinquennium. Exception is the Tirhut division for which the turning period is the sixth quinquennium. The fluctuations in the foodcrop acreage were normally low with exceptions only in the ninth quinquennium in Patna division and in the first quinquennium in Bhagalpur division where the acreage showed considerable fluctuations. It is quite natural that in a peasant based subsistence economy the fluctuations in food crop area will not be much except under special circumstances. In North Bihar the fluctuations were marked in the first decade which was a period of unusual natural calamities. The rates of decline in the last five year period is sharp in most of the region.

3.6 Trends in Non-food grain acreage

Non-food crop acreage, however, shows positive growth in the period between 1892 to 1941 thus underpinning Dharm Narain's assertion that depressing agriculture in greater Bengal during the colonial period hide many positive sectors of growth (Narain, 1967) The annual percentage growth rate estimated to be +0.8 percent (Table 3.15).

This rates stand out in contrast to Blyn's estimation of negative growth of non-food grain output during the same period for the British India (Table 3.15). In fact, our estimated rate is higher than those of United Province and Central Province calculated by Blyn and approximate very closely to that of Bombay-Sindh. It is also higher than the rates estimated by Islam for Bengal proper for both the official and revised series. Thus the reasons for negative pull at least in the non-food grain acreage for greater Bengal during the last fifty years of the colonial period cannot be assigned to North Bihar.

Table 3.15
Trends in Non-Foodgrain Acreage

Region		l Percentag wth Rate	ge		Percentage of total output
	Output	Popula	ation		
North Bihar	0.8	2.1	•		100.00
Patna Division	1.5	. 3.3	3		21.35
Tirhut Division	0.7	2.6	5		40.78
Bhagalpur Division	0.6	2.5	5		37.89
	Bly	n's Estim	iate	And the second s	Islam's Estimate
사용이 공항: 1	I	2	3		(1920 - 1946)
British India	0.4	0.9	0.03		
Greater Bengal	-0.4	- 0.5	0.00		
Madras	1.2	1.6	0.7		
Punjab	1.2	1.7	0.5		
United Province	0.6	1.4	0.4		
Central Province	0.1	1.5	-1.4		
Bombay-Sindh	0.9	1.8	0.05		
Bengal					1.2 (0.1)

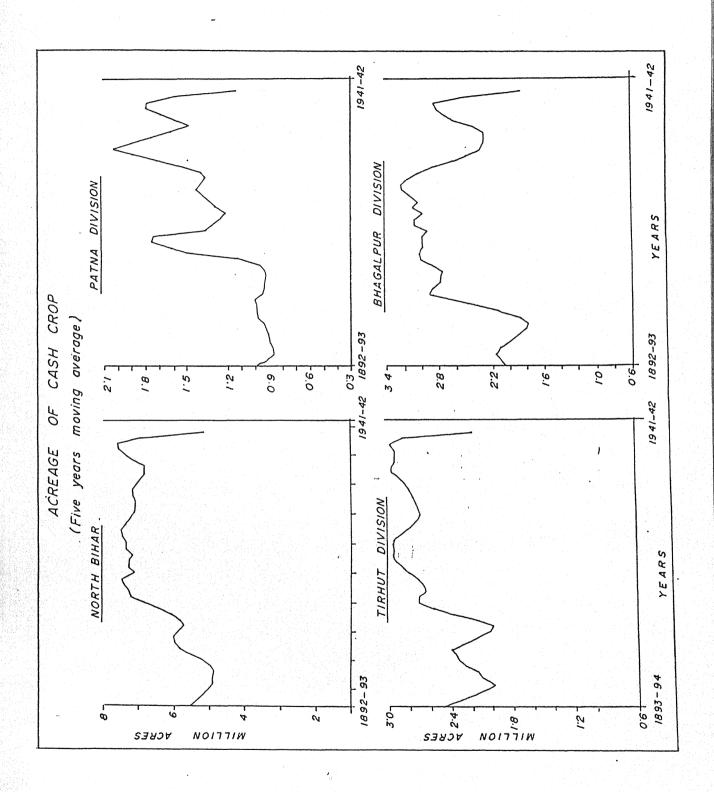
- 1. Blyns and Islam's estimate have been added to the lower part to the table for comparison.
- 2. Figures in the bracket indicate rates from revised series of Islam.
- 3. In Blyn's series nos.1, 2, and 3 indicate 10 years reference decade rates, first 4 decade rates and last 4 years rates respectively.

Source: Blyn (1966: 131-132);

Islam (1978: 70).

Table 3.16 Index Number of Cash Crop Acreage

	1937-38 to 1941-42	101	126	100	92	
	1932-33 to 1936-37	92	115	98	92	
	1927-28 to 1931-32	95	130	91	84	
en ega megi menga mendapan mendapan dan dapan sambab dapan sambab dapan sambab dapan sambab dapan sambab dapan	1922-23 to 1926-27	100	102	94	105	
	1917-18 to 1921-22	98	91	86	100	
e de la company	1912-13 to 1916-17	2.0	117	88	98	
	1907-08 to 1911-12	0.1	. 10	92	92	
	1892-93 1897-98 1902-03 to to to 1896-97 1901-02 1906-07			70		
(base: 1921 - 23)	Year		North Bihar	Patna Division	Tirhut Division	Bhagalpur Division



Of the North Bihar divisions, the rate of Patna division, 1.5 percent, is higher than the rates of North Bihar. It is, in fact, higher than the rates of even Punjab and Madras, the fastest growing regions as per rates calculated by Blyn. The rates of growth of Bhagalpur and Patna division are, however, lower than the regional rates.

The five yearly growth rates of non-food grains acreage of North Bihar follows a distinct pattern (Table 3.16). One low is the second quinquennium i.e. 1897-02. This is the period that follow the most devastating half decade of drought and famine in North Bihar's agriculture ending with the 1896. The other low is in the ninth quinquennium of 1932-37 which is the period of great depression. In between, the non-food grain acreage showed steady rise. This period stretches from 1902 to 1927. This is the period during which the indigo went into extinction and its cultivation was replaced by the ingressing sugarcane

Patna shows greater degree of fluctuations within a generally rising tendency. But the peak of non-food grain crop acreage in this division is reached in the fifth and the eighth quinquennia, the later being higher than the former, which are different from that of North Bihar (Table 3.16). Further, the fluctuation in acreage in Patna division is high. The acreage in Tirhut division by and large follows the regional pattern. Like Patna division again, the acreage pattern in Bhagalpur shows greater fluctuation than that of North Bihar. Its peak is the seventh quinquennium. In this it agrees with North Bihar but disagrees with other divisions. The depression seems to have affected the acreage under non-food crop in this division.

The following observations, therefore, follow from the foregoing discussion: (1) The growth of acreage under non-food grains is positive in North Bihar. By and large the interwar period is the period of growth of cash crop in North Bihar. (2) The growth rate, in fact, is higher than that of other regions of India calculated by Blyn and also that of Bengal proper estimated by Islam. (3) The decline of greater Bengal non-food cropsacreage should, therefore, be sought in other regions like southern Bihar plateau and Orissa. (4) The divisional rates reveal considerable regional variation in the acreage pattern within North Bihar.

3.7 Trends in all crop yield per acre

The rate of growth of the yeild per acre for all crop shows almost no change, -0.07

Table 3.17
Trends in All Crop Yield Per Area

Region		al Percenta owth Rate		•	Percentage of total output
	Output	Рорц	lation		
North Bihar	- 0.07	2.	1		100.00
Patna Division	- 0.3	3.	.3		29.60
Tirhut Division	-0.1	2.	.6		39.40
Bhagalpur Division	0.3	2.	.5		30.90
	В	iyn's Estir	nate		Islam's Estimate
	1	2	3		(1920 - 1946)
British India	0.01	0.5	- 0.02		
Greater Bengal	-0.3	0.08	-0.5		
Madras	0.6	1.2	0.2	•	
Punjab	0.6	0.5	0.9		
United Province	0.1	0.4	0.2		
Central Province	0.08	1.1	-0.9		
Bombay-Sindh	0.3	0.5	0.3		
Bengal			-		0.1

- 1. Blyns and Islam's estimates have been added to the lower part of the table for comparison.
- 2. In Blyn's estimate nos.1, 2, and 3 refer 10 years reference decade rates, first 4 decade rates and last 4 years decade rates respectively.

Source : Blyn (1966:165-166);

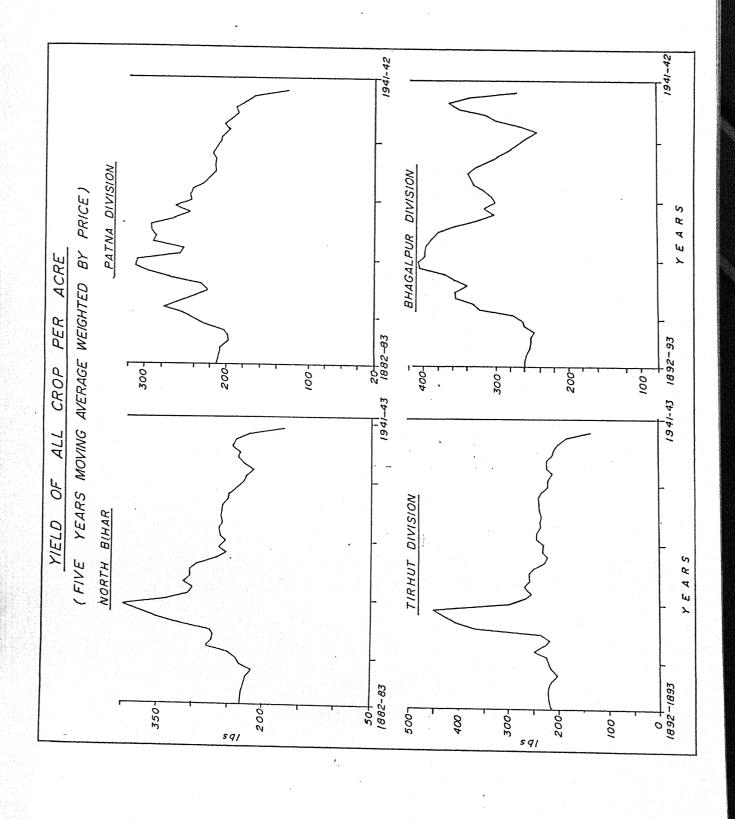
Islam (1978:75).

Table 3.18

Index Number of All Crop Yield Per Acre

(base: 1921 - 23)

Year	1892-93	1897-98 1902-03	1902-03	1907-08	1912-13	1917-18	1922-23	1927-28	1932-33	1937-38
	c)	ţ,	to	10	10	to	to	to	to	to
	1896-97	1901-02	1906-07	1911-12	1916-17	1921-22	1926-27	1931-32	1936-37	1941-42
And a straightful season (party produces from the play of the colony of the party of the colony of t		ent in the second section of the second section of the second second section of the second sec	e descrimantes de los mestes forma sus accesamentes estadas estados de la companya de la companya de los descri	skiderest blidden, det ibblikkens, de orden gemeer - 1 – 40,1 of despity ted		e de separa de la composito de	a parameter and the first of the many or (many or a parameter) and analysis of the first of the second or the seco	AND THE PROPERTY OF THE PROPER	e de de la company de la compa	
North Bihar	06	84	108	138	120	104	104	86	87	94
Patna Division	85	08	7 7 7	111	108	105	96	87	80	71
Tirhut Division	63	87	102	171	112	66	104	103	92	. 85
Bhagalpur Division	88	83	108	125	134	109	109	103	86	123
magnegarinden - Democratic des mercion de medica des especialismes debut made des l'estres despectación de 1800 de 180	And the state of t	THE PERSON NAMED IN COLUMN TO PERSON OF THE PERSON NAMED IN COLUMN TO	A TRANSPORTED THE THE THE TRANSPORTED BEAUTIFUL BANKS THE TRASPORTED BANKS TO THE TRANSPORTED BA			enta en ante establica e en de anteces de anteces de consecuente d	NAMES OF THE PARTY	THE PROPERTY OF THE PROPERTY O		



(Table 3.17). It might be recalled in this connection that during the same period the area under all crops in North Bihar also declined at a slightly higher rate of -0.3 percent (Table 11). During the same period Blyn's estimate of the growth rate of yield per acre of greater Bengal shows little higher rate of decline. The growth of yeild per acre rate of Bengal proper calculated by Islam, however, found to be slightly positive and higher for twenty seven years from 1920 to 1946 (Table 3.17).

Bhagalpur Division shows positive rate of growth for its all-crop yeild rates. Both Patna and Tirhut Division, however, show negative growth rates.

Index of quinquennial rates of growth show—that the all crop productivity reached its highest point in the fourth quinquennium. After that it fell steadily reaching its lowest depth in the quinquennium of the great depression i.e. 1932-33 to 1936-37 (Table 3.18). From there it showed some moderate rise. Further, the rates of change in the productivity prior to 1912-1744 moderately high. But the rates of decline after that quinquennium and slow (Table 3.18).

Patna division by and large, conformato the North Bihar pattern. Only two things to be specially noted here: First, the yield per acre rate in this division fell even after the ninth quinquennium; i.e. after the depression. Second, in the period between 1902 to 1917 the yeild per acre rate did not fluctuate much. For Tirhut Division, the yield per acre rate reached its peak in the fourth quinquennium. After that it fell almost continuously till the second world war, with only a moderate upward swing in the seventh quinquennium. Further, in Tirhut Division, the rate of change in productivity rate whigh. For Bhagalpur Division, on the other hand, the productivity rate rose steadily after the second quinquennium to reach its peak in the five year period between 1912 to 1917. After that it fell steadily till the period of the Great Depression. After the depression, the productivity rate in Bhagalpur division rose sharply during the second world war.

3.8 Trend in foodgrain yield per acre

Trend in yield per acre of foodgrain rates, however, show decline during the last fifty years of colonial period in North Bihar (Table 3.19). The decline in the productivity of rice, the most important foodcrop, primarily accounted for this decline in the foodcrop productivity rate. The moderate increase in the yield per acre of gram etc. could not make up the decline in the rice productivity (see next chapter on this). The decline in the yield per acre of foodgrains in North Bihar is, however, less than the decline of foodcropsyield

Table 3.19
Trends in Foodgrain Yield Per Acre

Region		l Percentage owth Rate		Percentage of total output
	Output	Population		
North Bihar	- 0.4	2.1	Make to hard the second hard and an account and account account and account account and account and account and account account account account and account account account account account account account account account and account accoun	100.00
Patna Division	-0.4	3.3		28.94
Tirhut Division	-0.4	2.6		42.77
Bhagalpur Division	-0.6	2.5		28.29
	Bl	yn's Estimate		Islam's Estimate
		2	3	(1920 - 1946)
British India	-0.2	0.3 - 0	.4	
Greater Bengal	-0.5	-0.1 -0	.7	
Madras	0.3	0.9 - 0.6	03	
Punjab	0.3	0.3	5.5	
United Province	- 0.02	0.6 - 0	3.3	
Central Province	0.05	- 1.1 C).8	
Bombay-Sindh	1	0.4 - 0	1.4	
Bengal			-	-0.2

- 1. Blyns and Islam's estimate have been added to the lower part to the table for comparison.
- 2. In Blyn's series nos.1, 2, and 3 indicate 10 years reference decade rates, first 4 decade and last 4 years decade rates respectively.

Source : Blyn (1966:165-166);

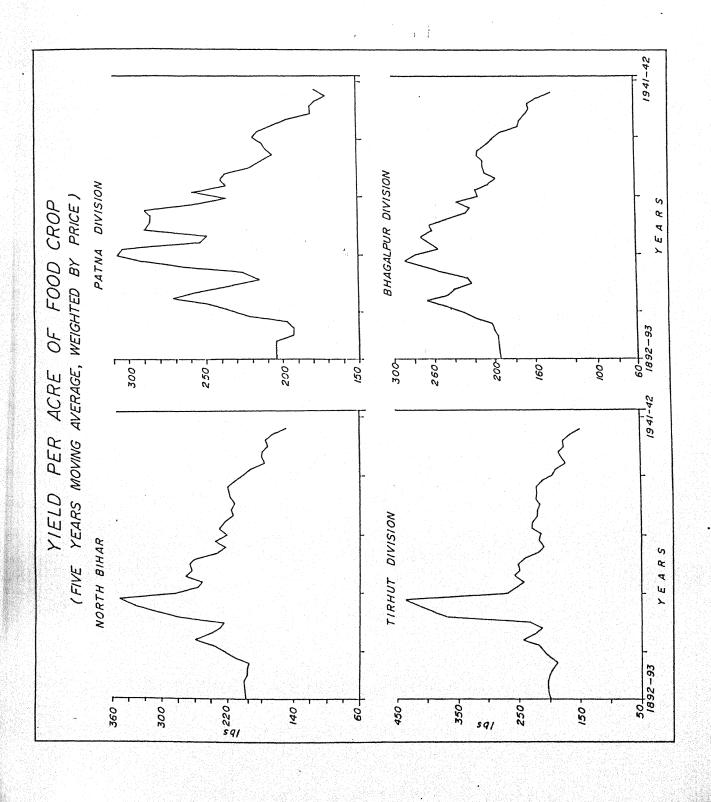
Islam (1978:77).

Table 3.20

Index Number of Food Crop Yield Per Acre

(base: 1921 - 23)

Year	1892-93	1897-98	1902-03	1907-08	1912-13	1917-18	1922-23	1927-28	1932-33	1937-38
	c)	to	to	to	to	to	(0)	to	(0)	to
	1896-97	1901-02	1906-07	1911-12	1916-17	1921-23	1926-27	1931-32	1936-37	1941-42
		And the state of t					manda mayoran ayan da manda mayoran ayan ayan ayan ayan ayan ayan ayan a	Andre and the second of the se	des de l'anne de	Programme and the control of the con
North Binar	86	φ 9	110	136	114	102	3.2	96	21	20
Patna Division	84	79		112	109	105	26	88	74	68
Tirhut Division	06	84	105	174	114	100	103	102	80	75
Bhagalpur Division	85	87	112	112	117	101	83	92	92	99



er acre of greater Bengal as calculated by Blyn. But the decline in North Bihar is higher an the productivity of foodcrops of Bengal proper calculated by Islam during the period etween 1920 to 1946.

The trends in Patna and Tirhut division conform to the yield per acre of food crop in ne North Bihar. The trend rate for the Bhagalpur division is, however, little higher than ne regional rate.

The turning period in the food crop productivity rate is the fourth quinquennium; e. the period between 1907-08 to 1911-12. After that the yield per acre rate folksteadily Table 3.20). Further, the rate of decline is quite high except between seventh and eighth quinquennia.

Both the division of Patna and Tirhut match—well with the North Bihar pattern. There is, however, palpable sign—of acceleration in the rate of decline after the seventh quinquennium in case of Patna division and after the eighth quinquennium in case of Firhut division. Bhagalpur division has, however, many deviations from the rest of North Bihar. First, the high point of yield per acre of Bhagalpur division is the fifth quinquennium, i.e. 1912-13 to 1916-17. Secondly, the rates in the division have greater fluctuations. It might be due to fluctuations in the productivity of jute crop.

3.9 Trend in non-food grain yield per acre

As in the case of output and area, the yield per acre of non-food grain crops how positive trend (Table 3.21) though the trend rate is somewhat less than the trend growth rate of area (Table 3.21). It is also a little less, 0.4 percent less, than the greater Bengal rate as calculated by Blyn and much less than that calculated by Islam for Bengal proper. Possibly the yield per acre rate of cash crops in Bengal proper is boosted by high productivity rate of tea.

Divisional rates do not agree with the regional rate in any respect. Both the Tirhut and Bhagalpur divisions have a little higher growth rate of productivity while Patna division, -0.4 percent, shows decline in the yield per acre rate of its cash crops. It is likely that the relatively high rate of sugarcane yield per acre might have contributed to the relatively higher productivity rate of cash crops in Tirhut and Bhagalpur divisions.

The five-yearly segmented growth rates for North Bihar showed the following pattern (Table 3.22). They have two highs of equal heights: one in the fourth quinquennium

Table 3.21

Trends in Non-foodgrain Yield Per Acre

Region		ual Percen Growth Rat Pop		Percentage of total output
North Bihar	0.2		2.1	300.00
Patna Division	- 0.4		3.3	21.35
Tirhut Division	0.4		2.6	40.76
Bhagalpur Division	0.3		2.5	37.89
	<u> </u>	3lyn's Est	imate 3	Islam's Estimate (1920 - 1946)
British India	0.9	0.8	1.1	
Greater Bengai	0.6	0.7	0.3	
Madras	1.2	1.6	0.6	
Punjab	1.1	0.5	1.7	
United Province	0.2	- 0.3	0.9	
Central Province	0.7	1.6	-0.02	
Bombay-Sindh	0.9	0.1	2.1	
Bengal				1.2

- i. Blyns and Islam's estimate have been added to the lower part of the table for comparison.
- 2. In Blyn's series nos.1, 2, and 3 refer to 10 reference decade rates, first 4 decade rates and last 4 decade rates respectively.

Source :

Blyn (1966: 165-166);

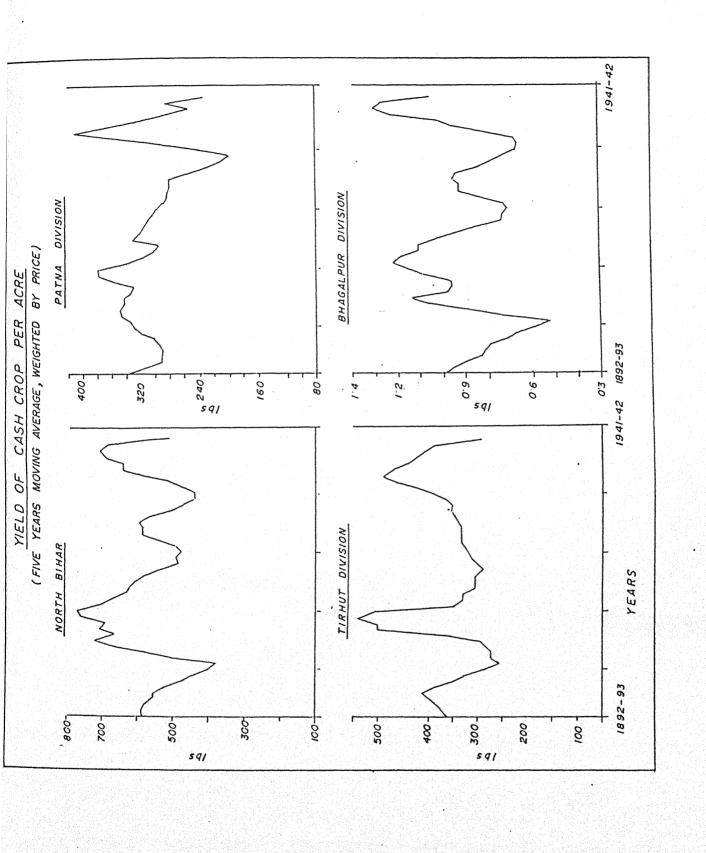
Islam (1978: 78).

Table 8.28

Index Number of Cash Crop Field Fer Acre

(base: 1921 – 23)

Year	1892-93	1897-93 1902-03	03 1007-08	1010 10	01 23101	00000			
	0)				07-7767	527.72	1527-28	1932-33	1937-38
	1808.07			3	01	0	t ا	to.	to
	70-0001	1901-02 1906-07	07 1911-12	1916-17	1921-22	1926-27	1931-32	1936-37	1941-42
NOTE DILLON	0		Andread and the state of the st		entra till den er entrett stilletterstydelsted fin beson is a bijer og				BOA. I calculate the same that the same and the same same and the same same same same same same same sam
Notes Dilla	123	104 109	150	140	108	93 H	101	, C'	- CUT
Patna Division	119						()	2	Oor
)	6 - TOT	117	109	107	96	75	127	92
Tirhut Division	112	111		1001	00	(1	•	
			04.7	OOT	DO -	101	105	141	123
Bhagalpur Division	137	104	145	164		и c t		0	
				101	₩ -4 -4	777	077	106	188



and the other in tenth. Lyhaw two lows also: one in the second quinquennium and in the eighth. The second low is lower than the first. Further, there is fairly wide fluctuations in the productivity rate.

Patna Division conforms to the regional pattern in almost all respect (Table 3.22). But the rate of decline is sharper after the period between 1922-23 and 1931-32. So is the rise in the ninth quinquennium and the fall there after. Thus, in the Patna division the fluctuations in the rates are more pronounced. Tirhut and Bhagalpur divisions show similar pattern: Only in case of Tirhut division the productivity rates have fallen quite sharply in the last quinquennium.

One general observation that one can made here is that for the cash crop yield per acre the watershed decade is the period 1907-08 to 1916-17. The cash crop productivity reached its peak during this decade to fall steadily till the beginning of the second world war. The war saw a sharp boost in the productivity rate of cash crop in this regions except in the Patna division.

From the discussion in this chapter, therefore, the following overview about the agricultural growth in North Bihar can be inferred. The agricultural growth in North Bihar generally declined during the last fifty years of the colonial rule. The rate of decline is in commensurate with the rate of decline of Greater Bengal. On the other hand this declining agriculture stood in contrast to the relative growth of Bengal proper particularly during the later part of the colonial days. The turning period in this agricultural growth is the five years period between 1907-08 to 1916-17. This is the peak period and also the period of the beginning of demise thenceforth. With virtual population explosion after 1921 in this region, the period also saw almost catastrophic fall in the per capita agricultural production.

Of the two determinants of crop output, the area cropped fell at a slightly higher rate than the yield per acre rate in North Bihar. And here again the situation in North Bihar is somewhat different from that of Greater Bengal where the agricultural productivity fell at slightly higher rate at the face of little or no change in area cropped. On the other hand, in the Bengal proper in the last four decades of colonial period, the agricultural productivity rose at rates higher than the rate of growth of cropped area. With the agriculture in Bengal proper showing signs of growth, the inference is inevitable that the North Bihar agriculture had lent its own weight to the decline of agriculture in the

Bhagalpur Division 0.00 0.00 0.00 0.03 0.03 0.03 0.03 0.08 0.00 0.12 0.12 0.15 0.15 0.16 0.13 0.14 0.15 0.15 0.140.14 0.13 0.17 Ratio of Area Under Non-Fooderop Division Tirbut 0.08 0.09 0.08 0.07 0.09 0.00 0.09 0.00 0.03 0.11 0.12 0.11 0.11 0.11 0.11 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 to All Crop Division Patha 0.06 0.06 0.06 90 0.07 0.00 0.05 0.05 0.07 0.05 0.05 0.00 0.15 0.05 0.03 0.00 0.07 0.03 0.08 0.08 0.08 0.08 North Billing 0.08 0.00 0.0 0.07 0.08 0.00 0.08 0.03 0.00 0.03 0.11 0.09 0.11 0.11 0.11 0.12 0.13 0.11 0.12 0.11 0.3 0.1 Bhagainur Liviaion 0.10 0.08 0.03 0.29 0.39 0.18 0.1.1 0.33 0.23 0.34 0.26 0.39 0.26 0.21 0.22 130 0.17 0.75 0.23 0.3 0.23 Division Tithut 0.09 0.12 0.08 0.10 0.02 0.15 0.09 0.1 0.09 0.1 0.1 0.14 0.12 0.12 0.13 0.00 0.0% 0.08 0.13 0.111 0.08 0.10 Ratio of Output of Non-Fooderop to All Crop Output Division Patma 0.00 0.06 0.08 0.00 0.00 0.03 0.06 0.06 0.07 0.03 0.12 0.05 0.04 0.07 0.11 0.08 0.08 0.07 0.05 0.00 0.07 0.07 0.07 0.1 Bihar North 0.13 0.13 0.08 0.03 0.08 0.19 0.22 0.19 0.05 0.13 0.16 0,15 0.13 0.15 0.13 0.12 0.13 0.16 0.21 0.15 0.13 0.15 0.15 0.2 0.16 1899-1900 96-97 97-98 98-99 02-03 07-08 93-94 94-95 01-02 04-05 05-06 01-60 11-12 96-36 12-13 1900-01 20-90 11-0161 13-14 14-15 15-16 16-17 17-18

Bhagalpur Division 0.19 0.17 0.18 0.18 0.16 0.13 0.14 0.14 0.140.14 0.15 0.18 0.17 0.13 0.33 0.17 0.19 0.17 0.21 Ratio of Area Under Non-Foodcrop Olvision Tirbut 0.11 0.13 0.13 0.12 0.11 0.13 0.11 0.11 0.11 0.11 0.11 0.120.12 0.13 0.13 0.13 0.13 0.13 to All Crop Division Pafina 0.08 0.08 0.00 0.08 0.120.12 0.12 0.12 0.09 0.03 0.09 0.13 0.13 0.13 0.1 0.1 Morth. Billier 0.12 0.140.13 0.13 0.13 0.13 0.12 0.12 0.12 0.12 0.13 0.120.12 0.12 0.12 0.15 0.14 Blagalour Division 0.25 0.28 0.26 0.39 0.29 0.36 0.42 0.29 0.28 0.23 0.21 0.22 0.25 0.54 0.39 0.49 0.57 0.57 Division Tuint 0.11 0.16 0.11 0.11 0.13 0.240.26 0.18 0.03 0.11 0.21 Ratio of Output of Non-Fooderep 0.1 0.1 0.2 0.2 0.3 to All Crop Output Division Patna 0.15 0.09 0.08 0.03 0.11 0.14 0.14 0.14 0.18 0.03 0.11 0.21 0.07 0.2 0.1 0.1 0.1 North Bihar 0.16 0.19 0.21 0.17 0.18 0.15 0.15 0.13 0.17 0.21 0.21 0.25 0.27 0.25 0.29 0.3 22-23 23-24 24-25 25-26 27-28 28-29 29-30 31-3232-33 33-34 34-35 35-36 36-37 37-88 38-39 39-40 21-22 40-41 26-27 1941-42 1930-31 1820-21

Table 3.23 (Contá.)

Ratio of Yield Per Acre of Non-Fooderap to Ali Crop Output

	North	Porma		Bhagadhur
	Dilar	Division	DW(SO)	Division
1892-93	0.15	0.12	0.17	0.22
70-83	0.16	0.12	0.15	0.2
94-95	0.13	0.07	0.1.5	T 3.0
95-96	0.13	9.03	÷	0.0
26-97	0.15	0.00	0.14	0.22
97-98	0.13	90.0	6.12	0.19
68-86	0.12	0.06	0.11	0.17
1899-1900	0.13	7.0.0	0.12	0.17
1900-01	0.13	80.0	0.12	0.18
01-02	0.13	0.00	0.13	0.15
02-03	0.08	0.00	0.00	0.03
03-04	60.03	0.03	0.03	0.09
04-05	0.08	0.06	0.07	0.11
05-06	0.16	90.0	0.09	0.29
20-90	0.18	0.07	0.1	0.34
07-08	0.22	0.00	0.1	0.39
60-80	0.19	0.12	0.03	0.33
09-10	90.0	0.05	0.03	0.18
1910-11	0.13	0.04	0.15	0.23
11-12	0.15	0.07	0.09	0.30
12-13	0.21	0.11	0.1	0.34
13-14	0.14	0.03	0.09	0.26
14-15	0.2	0.10	0.1	0.39
15-16	0.15	0.08	0.08	0.26
16-17	0.13	0.07	0.08	0.24
17-18	0.16	0.07	0.08	0.32
18-19	0.16	0.13	0.1	0.27
19-20	0.15	0.07	0.1	0.27

Ratio of Yield Per Acre of Non-Foodcrop to All Crop Output

	North	Patna	Lilit	Bhagalpur
	Bihar	Division	Division	Division
1892-93	0.18	0.12	0.17	0.22
93-94	0.16	0.12	0.15	0.2
94-95	0.15	0.07	0.1.4	0.21
95-96	0.13	0.05	0.13	0.3
26-95	0.15	90.0	0.14	0.22
97-98	0.13	90.0	0.12	0.10
66-86	0.12	90.0	0.11	0.17
0061-6681	0.13	0.07	0.12	0.17
. 10-0061	0.14	0.03	0.12	0.18
01-02	0.14	0.03	0.13	0.15
02-03	0.08	0.00	60.0	0.03
03-04	0.09	60.0	0.03	0.09
04-05	0.08	90.0	0.07	0.11
90-50	0.16	0.06	0.03	0.29
20-90	0.18	0.07	0.1	0.34
02-08	0.22	60.0	0.1	0.39
60-80	0,19	0.12	60.0	0.33
03-10	90.0	0.05	0.02	0.18
1010-11	0.13	0.04	0.15	0.23
11-12	0,15	0.07	60.0	0.30
12-13	0.21	0.11	0.1	0.34
13-14	0.14	0.08	0.09	0.26
14-15	0.2	0.10	0.1	0.39
15-16	0.15	0.08	0.08	0.26
16-17	0,13	0.07	0.08	0.24
17-18	0.16	0.07	0.08	0.32
18-19	0.16	0.13	0.1	0.27
19-20	0.15	. 0.07	0.1	0.27

eastern India. The situation in south Bihar plateau and Orissa remains to be explored, of course.

This generally stagnating agriculture however, hides some divergent trends and areas of growth. The food production, of course, declined both the area under food crop and their yield per acre contributing to this decline. With the population rising particularly after 1921, this meant critical fall in the per capita availability of food to the people of North Bihar, leading to persistent food shortage, occassional famine, poor public health and, not infrequently, pestilence.

The non-food grain crop; however, present somewhat different picture. Its growth rate is positive. In fact, the rate is higher than the growth rate of greater Bengal during the period. It also compares favourably with the rate of growth of cash crops of Bengal proper during the last four decades of the colonial period. The main contributing factor to this is the rise in the area under non-food grain crops though the yield per acre too had its share. The area under non-food grain crops in North Bihar grew at rates somewhat higher than the rate of growth of yeild per acre. Further, the rate of growth of area under non-food grain crops is higher than that in greater Bengal as well as Bengal proper. On the other hand the growth rate of yield per acre is slightly lower than that of greater Bengal and also Bengal proper.

In order to bring out in sharper focus this relationship of foodgrain and non-foodgrain crops in North Bihar we have presented the ratios of output, area and yield per acre of food and non-food crops in Table 3.23. The table shows the following things: First except in the period between 1902-03 and 1904-05 and in 1909-10, the share of non-food grain output varied from 12 to 20 percent of the total crop production till 1931-32 i.e. the depression period. After that there was sharp rise in the share of non-food grain output, its share in total crop production thereafter varying between 21 percent to 35 percent. (Table 3.23).

The divisional pattern by and large conform to the regional pattern. But the share of non-food grains to total crop in Bhagalpur division is almost at all levels higher than the regional share. This is the division which produced jute. The share in both Tirhut and Patna divisions is lower than that of Bhagalpur division and North Bihar as a whole. Second, the ratios of area under non-food grain shows rise from 1910 and more sharply, from 1930. The divisions show similar pattern. But in case of Bhagalpur the ratios are

higher. Third, the ratios of yield per acre of non-food crops to all crop also show rise, except in the few initial years of this century. The divisions follow the regional pattern.

In a few words the conclusions of this chapter can thus be summarised: First, the agricultural production in North Bihar has declined in the last fifty years of colonial rule. Second the output has fallen due to slightly higher decline in the cropped area and also due to marginal changes in the yield per acre. Third, the non-food grain production has, however, increased. The growth rates of output, area and yelld per acre of non-food crop has risen though not significantly. Fourth, the food production has declined sharply with serious drop in the per capita availability of food. In this case the rate of decline in area cropped is slightly more than the rate of decline in the yield per acre. This relationship somewhat modifies Bagchi's suggested hypothesis in his 'Reflections On Patterns of Regional Growth during the period of British Rule" on the relationship between area and productivity in the declining agriculture in Bihar region (Bagchi, 1976: 45).

In the next chapter we take up the individual crops for our consideration.

Chapter IV

INDIVIDUAL CROPS

In this chapter we would deal with the individual crops in North Bihar. In the matter of presentation we have followed the same sequence of area, output and yield per acre as we did in the earlier chapter. In each case the discussion on North Bihar as a whole is followed by the discussion of the three divisions.

Like the previous chapter the data have been presented in three basic tables, namely (1) the annual percentage growth rates of output, area and yield per acre; (2) the indices of four-yearly segmented growth and (3) the graphs of moving averages of the series of output, areas and yield per acre. In each case the individual crops rather than aggregate have been dealt with. In order to indicate the importance of each individual crops, we have also estimated the percentage of output and area respectively of individual crops to those of all crops.

Till 1900-01 the information on rice is given in their aggregate. From 1901-02, after the publication of <u>Season and Crop Report</u>, the information on rice was published separately for winter rice, autumn rice and summer rice and their total.

To obviate this difficulty, we have taken the winter rice and autumn rice from 1901-02 to estimate the rates. We have omitted summer rice altogether as it accounted for less than one percent of the total rice production of North Bihar. Further, the data gaps at the district level are enormous in the case of summer rice.

4.1 Trends in Individual Crop Output

Table 4.1 shows that two of the major foodcrops, winter rice and autumn rice, have negative rates of growth of output. The output of maize, the food of the Behari poor, also shows negative growth rate. Barley, 0.02 percent rate, shows almost no change. On the other hand, the wheat production increased at a barely positive rate (0.3 percent). The rate of growth of gram production was positive and higher than that of wheat.

Among the major cash crops, sugarcane, and among the minor cash crops, linseed, rape and mustard and jute showed positive growth rates. But the production of til, tobacco and, of course, indigo dropped. Indigo, a major cash crop in 1895 virtually disappeared from 1915.

The Patna division by and large, conforms to the regional pattern. In Tirhut division the production of barley, among the food crops, increased at positive rates. On the other hand, the rate of lineseed production decreased slightly. The production of cash crops like sugarcane and rape and mustard increased at rates somewhat higher than the regional. Til output production in Tirhut division showed near-zero rate. In Bhagalpur division the sugarcane production showed negative rates of growth. Further, the rate of increase of jute output in Bhagalpur division was almost equal to that of the region. The high negative growth rate of indigo crop, – 22.3 percent, testified to the withering away of this crop from this division also.

For the outpot of two major foodcrops of winter and autumn rice, the turning point is the decade 1907-1917. The trend of rice production in the aggregate in North Bihar can, in fact, broadly be devided into two periods. During the first period between 1902 and 1912 (Table 4.4 to 4.5) rice production in North Bihar rose at moderate rates despite frequent drought, flood and famine during the period. The winter rice output reached its peak in the fourth quinquennium (Table 4.4) and the autumn rice in the fifth quinquennium (Table 4.5). After this throughout the rest of the period till the end of the second world war the rice production fell unabated though at slow rates.

There was no representative division in North Bihar in rice production; they differed from the region in one way or the other. Till about the first world war winter rice production rate in Patna, Tirhut and Bhagalpur showed irregular rates of fluctuations. After 1912, winter rice poduction in Patna and Tirhut division fell, but increased in Bhagalpur division. But after 1916-17 the rate of winter rice output fell in all the divisions.

In the production of autumn rice, the decade between 1912 and 1922 can broadly be identified as the turning period (Table 4.6 and 4.7). Till 1912 the rate of autumn rice production in Tirhut and Patna division increased, the production in Bhagalpur remaining constant. After this decade the rate in all the divisions fell. In Patna division its growth rate remained stable in the last two quinquennia.

In North Bihar the rice was grown primarily for home consumption and not for marketing. Even when Burma was a part of India, rice trade was hardly 8 per cent of the total external foodgrain trade in India (Jather and Beri, 1949: 164). After the separation of Burma from British India in 1938-9, its share fell to bare one per cent of the total food grain trade in India. The fine quality rice which was produced primarily for marketing in

this region constituted still lesser percentage of the total rice trade. ¹ The rice finding its way to the market mostly came through the conduit of money-lenders or through the compulsions of the subsistence farmer selling their cereals to earn some urgent cash. Therefore to find out the reasons for decline in the rice production it is necessary to enquire into factors like irrigation, soil fertility etc. operating through area under rice crop or its yield per acre rather than market price.

Like rice, barley and maize were also not involved in the trade to any great extent. Maize in Bihar was primarily a poor man's cereals and was used extensively for paying the agricultural labourer. It was invariably grown as mixed crop. The maize production in North Bihar during the fifty year period had three broad phases. Output rate fell till the third quinquennium, to rise moderately in the fourth. After that upto 1926-27, the maize output in North Bihar fluctuated at moderate rates around a steady level. After this output fell and went on falling till the second world war end. Tirhut and Bhagalpur divisions by and large conformed to the regional pattern. In the period upto first world war, the maize production in Patna division was higher than the region and other divisions. In fact, the maize production in North Bihar including its divisions, showed high rates of fluctuation.

Fluctution is also the main features of the Barley production in North Bihar. It continued till the seventh quinquennium which was the pre-depression period of 1922-23 to 1926-27. After this growth rate of production shows almost no change. Tirbut reflected the regional pattern. The other two divisions showed wider rates of fluctuation.

Wheat and grams are the two foodcrops whose production were most affected by trade. In case of wheat it was premirily export trade and in case of grain it was the internal trade that mattered. The wheat trade was extremely fluctuating in North Bihar (Jather and Beri, 1949: 139). In the period of famine the local wheat price would shoot up high attracting wheat away from the import market. During the first three decades and half upto seventh quinquennium wheat production fluctuated and at times at high rates. From the eighth quinquennium between 1927-28 to 1931-32 wheat production in North Bihar showed steady decline at moderate rates. After 1920

^{1.} Starting from Buchanan, it had frequently been mentioned that the cultivators of North Bihar, particularly the bigger ones had produced fine quality rice for export to other part of India and also abroad.

wheat export from this region generally declined except in 1938-39 in spite of the imposition of import duty on wheat in 1930 to protect the internal production.

Patna and Bhagalpur division could be decribed as the representative division of the region. The pattern of fluctuation of its rates was almost identical with the region. Tirhut division showed somewhat different pattern. Till the end of first world war its production showed fairly high rates of fluctuation. After the war, i.e. after the fifth quinquennium, the wheat production in Tirhut division stabilised somewhat.

Gram output rates in North Bihar rose till 1926, i.e. upto the seventh quinquennium. After that it fell continuously. Gram output Patna division too reached its peak in the seventh quinuinnium to fell thereafter. The gram production in Tirhut reahed its peak in the fifth quinquennium and in Bhagalpur in the sixth. After that it declined at moderate rates. Gram output, in fact, showed high degree of fluctuations in North Bihar and in its divisions.

Sugarcane ² output in North Bihar had three distinct period of growth. Till the beginning of the first world war the sugarcane production fell at high rate due to low prices of imported sugar. After the fifth quinquenium i.e. 1912-13 to 1916-17, its output started rising under the stimulas of the war time price rise. The rise was, however at slow rate. This sluggishness in the growth rates of sugarcane output was due to fall in sugar price in the interwar period caused by over production in the principal sugarcane producing countries and dumping of excess sugar in the world market. In 1932 the protection was granted to the Indian sugar which led to increase in the number of factories in North Bihar and increased demand for sugarcane in the home market. In the period between 1932-33 and 41-42, the sugarcane output in North Bihar increased sharply. During the second world war, i.e. in the 10th quinquennium, however, the sugarcane output in North Bihar fell somewhat.

Pattern in the division do not conform to that of the region. In Patna division the sugarcane output fluctuated at moderate rates. The production in Tirhut, on the other hand, showed fluctuations and at high rates. Wide fluctuations at high rates also marked the sugarcane output production in Bhagalpur division during this period. One specific

The market price affects the cash crop production more than the foodcrop. A.R. Sinha, H.C. Sinha, J.R. Gupts Thakurata, Dharm Narain, Raj Krishna and Rabbani analysed the effect of prices on individual crops. See on this Bagchi (1972: 102).

feature of sugarcane output in North Bihar and in the division was that it reached its peak in the ninth quinquennium, i.e. 1932-33 to 1936-37, which is actually the post depression period.

Like sugarcane, the production of oilseeds like rape and mustard and linseed were affected by the market condition. The percentage share of export trade of the rape and mustard in last thirty years was positive but declining (Jather and Beri, 1949: 164).

The quinquennial growth rates, however, showed diverse tendencies. In the fourth quinquennium before the first world war period, the output of rape and mustard increased sharply. The export of oilseed during this period was also increasing (Jather and Beri, 1949: 150). From the fifth quinquinnium to the seventh, the rape and mustard output fluctuated moderately and from the seventh quinquennium onwards its production continuously fell at moderate rate. Patna division did not follow the regional pattern. The rape and mustard production in this division fluctuated through out at high rates. But the production in Tirhut division followed the regional pattern. The production in Bhagalpur fell steadily after the sixth quinquennium.

For linseed output in North Bihar the period of highest production was the decade between 1917 and 1927. Before that period the production of linseed showed high degree of fluctuations. After the seventh quinquinnium the linseed production fell. Patna and Tirhut division by and large follow the regional pattern. But the rates of fluctuations are higher. In Bhagalpur division, the linseed output increased till the sixth quinquennium and then it fell. In the last decade was it rose slightly.

In North Bihar the jute was produced in Bhagalpur and Tirhut divisions only. The jute output had two peaks: one in the fifth quinquennium and the other in the tenth i.e. the second world war period. The inter-war period saw fall in the jute output. The specific feature of jute output was high degree of fluctuations. Jute production on Bhagalpur division matched well with the regional pattern. But Tirhut had different pattern. For Tirhut division the peak period of production was the second and third quinquennia before the first world war period and in the eighth quinqueninnum.

Two other minor cash crops, til and tobacco, in North Bihar were primarily involved in the local trade. This was particularly so for tobacco. Though til figured in the crop export item, its share was not high and even that was decreasing throughout this century.

In the pre-war period the tobacco output rates in North Bihar decreased by and large, excepting a moderate drop in the fourth quinquennium. The depression and the second world war saw severe slump in the tobacco output in North Bihar.

Patna division differed altogether from the regional pattern. In the period between 1892 and 1927 the tobacco output rates fell continuously except in the fourth quenquennium when it remained constant. But after that its rates fluctuated. The other two divisions, by and large, conformed to the regional pattern, except that in Bhagalpur division its production increased even during the depression unlike in other divisions.

Til production in North Bihar fell at slow rates upto the second world war period with mild fluctuations in the inter-war period. The second world war, however, saw increased til production in North Bihar.

The divisions did not agree with the regional pattern. Their features can thus be summarised: First, The fluctutations in their output are high. Second, til output reached their peak in the first decade of the inter war period and fell thereafter till the eighth quinquennium. The second world war saw moderate rise in till production in the divisions.

Conclusion of this part of the discussion are the following: (1) The longterm trend rate showed that only the production of wheat and gram among the food crops increased. The production of all other food crops, including rice, decreased. (2) The production rate of cash crops such as sugar, rape and mustard, linseed and jute increased during the period. Indigo disappeared and the production of til and tobacco fell. (3) Within this long-term trend, the growth rates of all crops varied from one quinquennium of another. Large fluctuations in production were a basic feature of crop production in North Bihar. (4) The turning decade in the production of food crops was the period between 1907 to 1917; for gram and barley, however, this turning periods were 1922-27 and 1927-31 respectively, after which all them showed declining trend. The positive quinquennial growth indices of wheat and gram showed decline after this turning period. (5) Cash crops in general did well after the first world war. But for sugarcane the real period of growth was the ninth quinquennium in which case the general depression was offset by linkage effect of the high tariffs on imported sugar.

Table 4.1

Annual Percentage Rates of Growth of Individual Crop Outputs in North Bihar, 1892 – 1941

		Percentage to Total Output	North Bihar	Patna Division	Tirhut Division	Bhagalpur Division
1.	Winter Rice	46	- 2.1	- 2.4	- 1.4	- 2.4
2.	Autumn Rice	6	- 3.4	- 1.5	- 2.8	- 4.3
3.	Maize	9	- 1.4	- 2.9	- 1.2	- 1.4
4.	Wheat	8	0.3	0.4	0.5	0.3
5.	Barley	8	- 0.02	- 0.6	0.3	- 0.8
6.	Gram	10	1.6	2.8	0.2	0.7
7.	Linseed	4	0.5	2.2	- 0.4	1.4
8.	Sugar	3	0.9	1.03	1.5	-0.4
9.	Rape and Mustard	3	0.4	0.5	1.7	- 0.3
10.	Til	2	- 2.1	- 3.7	- 0.08	- 1.8
11.	Tobacco	1	- 0.8	-2.4	-0.4	- 1.3
12.	Jute		1.5		0.9	1.7
13.	Indigo	***************************************	- 18.5		- 11.9	- 22.3

Note: Indigo production virtually stopped after 1910s.

Table 4.2

Index of Output of Individual Crops in North Bihar in quinquennium, 1892-93 – 1896-97

(Dasc	. 1020 21 to 1022 20,				
Crop		North Bihar	Patna Division	Tirhut Division	Bhagalpur Division
1.	Winter Rice				
2.	Autumn Rice				
3.	Maize	150	291	130	150
4.	Wheat	84	100	85	62
5.	Barley	67	125	. 52	81
6.	Gram	47	27	94	62
7.	Linseed	54	29	80	23
8.	Sugar	131	97	166	113
9.	Rape and Mustard	57	123	41	58
10.	Til	175	121	113	417
11.	Tobacco	143	618	123	164
12.	Jute	119		93	120
13.	Indigo				
	그리고 그 아이를 그리고 아내는 것들이 모양을 하는 사람이 아니다. 나를			그 하는 나는 이 나는 사는 내용하다는 그 사람.	

Table 4.3

Index of Output of Individual Crops in North Bihar in quinquennium, 1897-98 – 1901-02

Crop		North Bihar	Patna Division	Tirhut Division	Bhagalpur Division
1.	Winter Rice			· ·	
2.	Autumn Rice		-		eventure.
3.	Maize	138	268	131	122
4.	'Wheat	65	70	65	59
5.	Barley	102	119	93	137
6.	Gram	35 (26	56	41
7.	Linseed	41	34	53	24
8.	Sugar	105	74	120	139
9.	Rape and Mustard	58	122	49	56
10.	Til	124	133	66	61
11.	Tobacco	125	487	100	154
12.	Jute	77	-	216	72
13.	Indigo				

Table 4.4

Index of Output of Individual Crops in North Bihar in quinquennium, 1902-03 – 1906-07

Crop		North Bihar	Patna Division	Tirhut Division	Bhagalpur Division
1.	Winter Rice	138	151	116	151
2.	Autumn Rice	104	108	77	132
3.	Maize	98	182	86	97
4.	Wheat	80	88	61	97
5.	Barley	94	90	89	135
6.	Gram	56	34	79	93
7.	Linseed	70	66	88	34
8.	Sugar	95	95	70	163
9.	Rape and Mustard	57	95	40	62
10.	Til	105	111	40	107
11.	Tobacco	96	378	83	108
12.	Jute	127		216	124
13.	Indigo				

Table 4.5

Index of Output of Individual Crops in North Bihar in quinquennium, 1907-08 – 1911-12

Crop		North Bihar	Patna Division	Tirhut Division	Bhagalpur Division
1.	Winter Rice	158	128	220	113
2.	Autumn Rice	107	140	81	132
3.	Maize	106	241	102	85
4.	Wheat	127	181	83	124
5.	Barley	91	84	91	105
6.	Gram	64	50	88	81
7.	Linseed	60	41	67	65
8.	Sugar	81	94	71	76
9.	Rape and Mustard	105	81	193	64
10.	Til	96	76	80	161
11.	Tobacco	107	378	98	116
12.	Jute	198		110	201
13.	Indigo				-

Table 4.6

Index of Output of Individual Crops in North Bihar in quinquennium, 1912-13 – 1916-17

Crop		North Bihar	Patna Division	Tirhut Division	Bhagalpur Division
1.	Winter Rice	131	126	127	142
2.	Autumn Rice	111	163	95	124
3.	Maize	102	102	110	92
4.	Wheat	106	112	90	121
5.	Barley	97	106	96	87
6.	Gram	88	90	114	67
7,	Linseed	94	129	88	70
8.	Sugar	93	111	89	59
9.	Rape and Mustard	86	129	96	76
10.	Til	109	157	86	161
11.	Tobacco	90	230	90	88
12.	Jute	238		129	242
13.	Indigo	-			-

Table 4.7

Index of Output of Individual Crops in North Bihar in quinquennium, 1917-18 – 1921-22

Crop		North Bihar	Patna Division	Tirhut Division	Bhagalpur Division
1.	Winter Rice	107	107	107	105
2.	Autumn Rice	104	119	99	108
3.	Maize	75	65	88	58
4.	Wheat	86	89	85	83
5.	Barley	91	93	87	110
6.	Gram	92	96	88	86
7.	Linseed	93	98	91	93
8.	Sugar	94	100	94	80
9.	Rape and Mustard	94	106	86	97
10.	Til	127	138	132	106
11.	Tobacco	94	167	97	88
12.	Jute	147		140	148
13.	Indigo	-			

Table 4.8

Index of Output of Individual Crops in North Bihar in quinquennium, 1922-23 – 1926-27

Crop	일 : 12 : 12 : 12 : 12 : 12 : 12 : 12 : 1	North Bihar	Patna Division	Tirhut Division	Bhagalpur Division
1.	Winter Rice	95	92	108	81
2.	Autumn Rice	86	94	80	92
3.	Maize	96	106	102	84
4.	Wheat	96	106	94	87
5.	Barley	98	93	100	89
6.	Gram	95	100	94	83
7.	Linseed	96	116	94	79
8.	Sugar	97	94	106	82
9.	Rape and Mustard	96	119	100	92
10.	Til	91	81	92	92
11.	Tobacco	99	137	104	92
12.	Jute	176		92	179
13.	Indigo				

Table 4.9

Index of Output of Individual Crops in North Bihar in quinquennium, 1927-28 – 1931-32

Crop		North Bihar	Patna Division	Tirhut Division	Bhagalpur Division
1.	Winter Rice	93	84	107	86
2.	Autumn Rice	73	84	61	85
3.	Maize	92	112	98	80
4.	Wheat	92	95	95	84
5.	Barley	90	88	92	81
6.	Gram	84	83	87	83
7.	Linseed	61	, 84	59	39
8.	Sugar	100	96	112	78
9.	Rape and Mustard	87	136	98	76
10.	Til	83	115	84	64
11.	Tobacco	119	428	132	97
12.	Jute	132		262	128
13.	Indigo				

Table 4.10

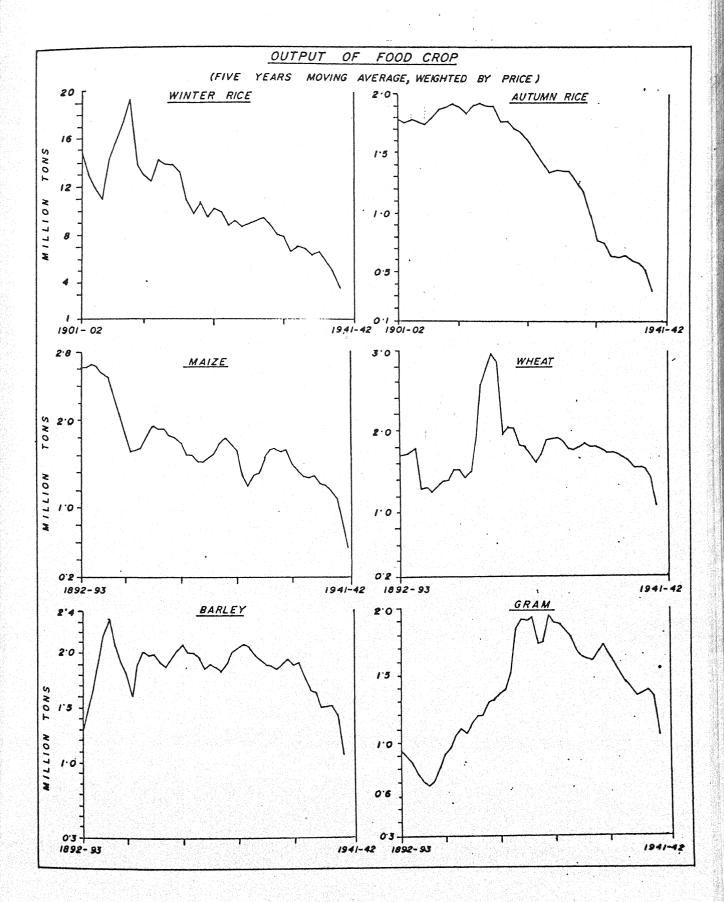
Index of Output of Individual Crops in North Bihar in quinquennium, 1932-33 – 1936-37

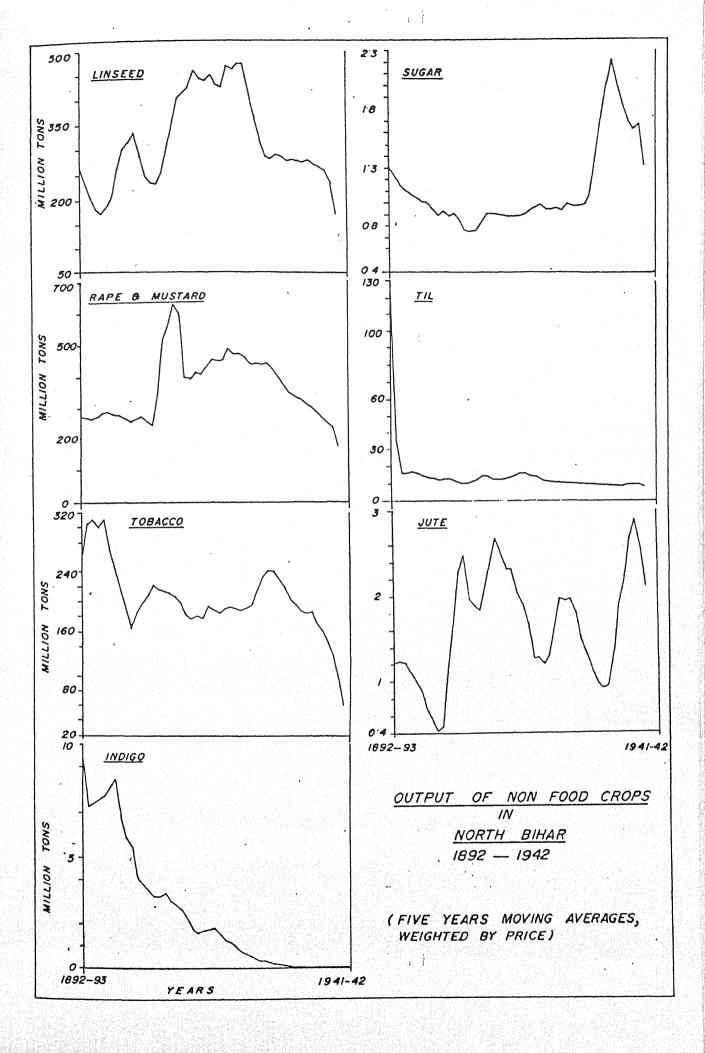
			the control of the state of the		
Crop		North Bihar	Patna Division	Tirhut Division	Bhagalpur Division
1.	Winter Rice	67	65	71	65
2.	Autumn Rice	42	84	40	41
3.	Maize	78	93	75	80
4.	Wheat	88	96	82	86
5.	Barley	84	86	84	78
6.	Gram	77	78	70	78
7.	Linseed	60	83	57	41
8.	Sugar	208	168	270	126
9.	Rape and Mustard	68	140	86	52
10.	Til	78	132	72	71
11.	Tobacco	93	187	84	104
İ2.	Jute	108		195	105
13.	Indigo		<u>-</u> ;		

Table 4.11

Index of Output of Individual Crops in North Bihar in quinquennium, 1937-38 – 1941-42

Crop	North Bihar	Patna Division	Tirhut Division	Bhagalpur Division
Dis	55	52	63	48
1. Winter Rice	33	84	35	27
2. Autumn Rice	68	92	65	38
3. Maize	79	87	77	1
4. Wheat		_83	71	£3
5. Barley	73	68	89	7
6. Gram	72	68	54	43
7. Linseed	55		227	111
8. Sugar	171	129	79	35
9. Rape and Mustard	54	118		58
10. Til	83	94	89 ~^	68
11. Tobacco	71	185	72	284
12. Jute	281		204	204
13. Indigo				





4.2 Trends in Individual Crop Acreage

percentage growth rates of acreage of individual crops in North Bihar in general showed the same pattern as the output growth rates. The only exception was barley for which the acerage growth rate, 0.5 percent, was positive while the output growth rate showed little or no change (Table 4.12). The growth rates of the acerage under the principal food crops like winter and autumn rice and maize were negative. But the rates of growth of acreage under wheat and grain and barley were positive. For the cash crops like sugarcane, rape and mustard, linseed and jute the acreage growth rates were positive. On the other hand, the acreage growth rates for til, tobacco and, of course, indigo were negative in North Bihar.

Patna division conformed to the regional pattern, except in the case of gram. In the later case the annual growth rate of acreage was negative. The situation was same in case of Tirhut division except in case of til, in which case the acreage growth was slightly positive, +0.1. Bhagalpur division has, however, a number of diviations. The acreage under wheat and barley was negative. The acreage under sugarcane and rape and mustard also declined in Bhagalpur division (Table 4.12).

Quinquennial growth rates of winter rice shows that the fifth quinquennium, i.e. the period between 1912-13 and 1916-17, roughly the first world war period, is the turning period. After this quinquennium the acreage under this crop declined steadily. The period before the first world war was the period of recurrent drought and floods.

Tirhut division, by and large, conformed to the regional pattern. In Bhagalpur division the acreage rates showed more fluctuations in the initial quinquennia. After the first world war period the acreage growth rates in Bhagalpur by and large matched the regional pattern. In Patna division the acreage fell steeply till the sixth quinquennium. After that the decline became moderate.

For the autumn rice acreage the turning period was the sixth quinquennium, i.e. the period after the first world war. In the three quinquennia before that the acreage increased slowly. But after the sixth it fell sharply till the second world war.

For the divisions also the sixth quinquennium is the turning period. Before that period the growth rates of acreage under autumn rice increased in all the divisions. In Bhagalpur it had greater fluctuations. After the sixth quinquennium it fell in all the divisions, except in Patna where it increased during the depression and threrafter.

The acreage under maize in North Bihar declined in the first four periods at moderate rates. From the fifth quinquennium onwards it showed moderate fluctuations. Patna, Tirhut and Bhagalpur division showed similar pattern of fluctuations. But the rates of fluctuations are moderate.

Throughout the five quinquennia till the end of first world war the wheat acreage rate increased. After the war it showed fluctuations. Patna division followed the regional pattern. In Tirhut division the acreage growth rate fluctuated initially. After the third quinquennium it increased at slow rates to reach its peak in the sixth quinquennium and then it continued to decline. In Bhagalpur division it increased showly in the first five quenquennia. After that the acreage rates showed fluctuation.

Acreage growth rate under barley showed three distinct features. Before the first world war the rate was positive. From the first world war onwards it rose slowly till the second world war. During the second world war it declined considerably.

Tirbut reflected closely the regional pattern. The other two divisions showed different pattern. In Patna division it showed fluctuations. After 1927-28, it increased at moderate rates till the end of depression. The depression seemed to had no impact on the area under barley. In Bhagalpur division the acreage under barley showed fluctuations reaching its lowest level in the fifth quinquennium.

Growth of acreage under gram had three stages: In the period before the first world war period it showed considerable fluctuations. Since the first world war period it started rising till the seventh quinquennium and then stabilised for the rest of the period. Gram acreage rate in Patna division reflected the regional pattern closely. In the other two divisions it showed high rates of fluctuations.

In North Bihar in the twentieth century the sugarcane increasingly replaced indigo as the main cash crop in the region, the jute crop being confined only in the Bhagalpur region. Like all cash crops, the sugarcane acreage in North Bihar responded to the market prices, the tariff policy and by the conditions in the indigo cultivation.

From this perspective the pattern of sugarcane acreage growth in North Bihar falls into four broad periods. First, in the period before the first world war the acreage under sugarcane declined in the face of fall in sugarcane prices caused by import of sugar from Java and Mauritius. Second, during the first world war, the acreage under sugarcane rose considerably under the stumulus of continued rise in prices. Third, in the sixth

quinquennium, however, the area under sugarcane shrank considerably in North Bihar. This development was somewhat in contrast to the all-India situation³ where sugarcane acreage and production remained more or less stable. During this period the North Bihar sugarcane growing regions were affected by widespread drought and outbreak of the influenza and beri-beri which affected the poor peasants of North Bihar who were the main sugarcane producers in their region under the control of the erstwhile indigo planters. Fourth, in the seventh quinquennium and particularly from the eighth quinquennium onwards there was virtual spurt in the acreage under sugarcane in North Bihar. This was largely due to increase in the number of sugar factories in the region following the protection granted to it in 1931 and consequent rise in the demand for sugarcane and its prices in the local market.

Three divisions show three different pattern. In Patna division the acreage increased till the end of the first world war; it fell sharply in the next two quinquennia, and then it showd wide fluctuations. In Tirhut division the acreage fell till the fourth quinquennim. After that it rose continuously. In Bhagalpur division the acreage fell till the end of the first world war and then fluctuated upto the end of eighth quinquennium. During the depression and during the second world war the acreage increased moderately.

The acreage under rape and mustard in North Bihar increased slowly from 1892 to reach its peak in the sixth quinquennium, i.e. 1917-18 to 1921-22. After that the acreage declined. Both Tirhut and Bhagalpur followed the regional pattern. In Patna division, except some moderate fluctuations in the period between 1907 and 1922, the acreage maintained steady growth.

Linseed acreage in North Bihar was marked by high rates of fluctuations between 1892 and 1922 and then ownard it generally increased to its peak in the seventh quinquennium. After that it declined steadily.

In Patna division the linseed acreage showed high rates of fluctuation in the first three decades, reaching its peak in the seventh quinquennium and remain more or less constant for the rest of the period. For the other two divisions the peak period is the sixth quinquennium. After the peak the linseed acreage declined in these two divisions.

^{3.} See Jather and Beri (1949:145). See also Bagchi. Bagchi's analysis of sugarcane begins from 1901, Bagchi (1972:102-111)

Growth of acreage under tobacco in North Bihar can be devided into two district stages. In the first five quinquennia, it declined. After that it increased, while fluctuating at moderate rates from one period to another.

Both Tirhut and Bhagalpur division reflected fairly closely the regional pattern, except in the last two quinquennia in case of Tirhut and the last quinquennium in case of Bhagalpur division. The acreage in Tirhut declined considerably during the depression and the second world war. In Bhagalpur division it fell during the war. The acreage growth in Patna division fell continuously till the seventh quinquennium. Thereafter it rose to fell again in the depression period.

The acreage under til showed fluctuations. It rose during the depression and remained stable at that level during the war. For divisions their salient feature was high rates of fluctuation and this was particularly marked in case of Bhagalpur division.

Conclusions from the above discussion can now be put together. The trend rates of area of the foodcrop showed that the area under winter and autumn rice and maize declined. The trend rates of wheat and gram showed increase. In the case of barley the trend growth rate of area were positive, 0.5 percent, though the output trend rate showed little or no change. For the cash crops like sugarcane, rape and mastard, linseed and jute the trend growth rates were positive. Only cash crop which showed negative trend growth rate were til and tobacco.

Quinquennial rates of these crops give out certain other features of the growth of areas under these crops. For the important winter and autumn rice crop the crucial period in the growth of areas under them was the decade between 1917 to 1927 after which its declined. For the area under wheat crop the turning period was the period between 1927 and 1931 after which it declined. On the other hand, barley showed steady rise since the first world war period. For gram the period of accelereded growth wasthe fifth quinquennum.

For the cash crops like sugarcane the crucial period is the period between 1922 and 1926, i.e. the first world war. After this period, the area under sugarcane in North Bihar accelerated in spite of fluctuation. For rape and mustard the turning period is 1922-23 to 1926-27 and for linseed it is 1927-28 to 1931-32 after both declined. The quinquennial growth rates of tobacco area since that period showed

Table 4.12

Annual Percentage Rates of Growth of Individual Acreage in North Bihar, 1892–1941

Crop		North Bihar	Patna Division	Tirhut Division	Bhagalpur Division
1.	Winter Rice	- 0.9	- 1.3	- 0.3	- 0.9
2.	Autumn Rice	- 1.5	-0.12	- 0.3	- 2.9
3.	Maize	- 0.5	- 1.4	- 0.08	- 0.7
4.	Wheat	0.13	0.4	0.16	- 0.2
5.	Barley	0.5	0.7	0.8	- 0.8
6.	Gram	1.5	- 3.2	0.11	0.23
7.	Linseed	0.9	1.8	0.11	3.06
8.	Sugar	1.01	1.6	1.5	- 1.7
9.	Rape and Mustard	0.6	0.4	1.7	- 0.04
10.	Til	- 1.6	- 3.2	0.12	- 0.7
11.	Tobacco	-0.4	- 1.7	- 0.2	- 0.5
12.	Jute	1.7		1.12	1.8
13.	Indigo	- 12.6		- 12.7	- 19.9

Note: As in table 4.1

Table 4.13

Index of Acreage of Individual Crops in North Bihar in quinquennium, 1892-93 – 1896-97

Crop		North Bihar	Patna Division	Tirhut Division	Bhagalpur Division
1.	Winter Rice		W	-	
2.	Autumn Rice	-	e e e e e e e e e e e e e e e e e e e		
3.	Maize	115	146	83	171
4.	Wheat	90	89	86	97
5.	Barley	64	83	48	138
6.	Gram	67	32	115	122
7.	Linseed	56	57	70	20
8.	Sugar	134	94	138	224
9.	Rape and Mustard	53	99	40	54
10.	Til	820	104	98	219
11.	Tobacco	165	704	151	173
12.	Jute	79		131	78
13.	Indigo	258	-		

Table 4.14

Index of Acreage of Individual Crops in North Bihar in quinquennium, 1897-98 – 1301-02

		tera et alle a populare i di i i di la comi	The second secon		
		North Bihar	Patna Division	Tirhut Division	Bhagalpur Division
1.	Winter Rice				
2.	Autumn Rice	(1923년 전 1923년 1924년 1924 (2017년 1924년 1			
3.	Maize	109	145	86	142
4.	Wheat	95	93	93	99
5.	Barley	93	78	90	136
6.	Gram	48	30	81	72
7.	Linseed	54	59	65	22
8.	Sugar	110	75	102	226
9.	Rape and Mustard	52	99	42	51
10.	Til	106	86	62	50
11.	Tobacco	139	416	123	155
12.	Jute	59		131	57
13.	Indigo	299	<u></u>	8	180

Table 4.15

Index of Acreage of Individual Crops in North Bihar in quinquennium, 1902-03 – 1906-07

		North Bihar	Patna Division	Tirhut Division	Bhagalpur Division
1.	Winter Rice	121	144	102	126
2.	Autumn Rice	93	78	77	108
3.	Maize	97	147	76	123
4.	Wheat	94	98	79	109
5.	Barley	100	83	99	143
6.	Gram	55	33	87	89
7.	Linseed	77	64	97	41
8.	Sugar	94	90	68	195
9.	Rape and Mustard	59	93	44	62
10.		108	86	49	
11.	Tobacco	101	207	95	104
12.	Jute	150	-	131	151
13.	Indigo .	215		4	127

Table 4.16

Index of Acreage of Individual Crops in North Bihar in quinquennium, 1907-08 – 1911-12

		North Bihar	Patna Division	Tirhut Division	Bhagalpur Division
1.	Winter Rice	103	131	90	93
2.	Autumn Rice	95	101	79	108
3.	Maize	93	156	78	102
4.	Wheat	104	106	82	130
5.	Barley	90	80	92	99
6.	Gram	57	43	82	76
7.	Linseed	67	50	73	71
8.	Sugar	85	101	67 ·	104
9.	Rape and Mustard	73	85	81	67
10.	Til	87	115	60	167
11.	Tobacco	96	241	92	98
12.	Jute	186	12 기 등에 1월 27 5년 1일 기 년 1일 22 2월 27일 (11년) 1 1 1일 2	131	188
13.	Indigo	265		3	76

Table 4.17 Index of Acreage of Individual Crops in North Bihar in quinquennium, 1912-13 - 1916-17

		North Bihar	Paina Division	Tirhut Division	Bhagalpur Division
1.	Winter Rice	111	118	102	115
2.	Autumn Rice	97	116	96	97
3.	Maize	101	109	97	108
4.	Wheat	111	106	94	139
5.	Barley	95	95	96	92
6.	Gram	81	82	89	72
7.	Linseed	88	103	85	77
8.	Sugar	114	168	78	91
9.	Rape and Mustard	86	108	98	77
10.	Til	100	108	77	174
11.	Tobacco	93	211	93	92
12.	Jute	196		116	198
13.	Indigo	143		1	77

Table 4.18 Index of Acreage of Individual Crops in North Bihar in quinquennium, 1917-18 – 1921-22 (Base: 1920-21 to 1922-23)

		North Bihar	Patna Division	Tirhut Division	Bhagalpur Division
1.	Winter Rice	101	97	104	101
2.	Autumn Rice	100	109	96	103
3.	Maize	' 91	80	92	93
4.	Wheat	95	91	99	94
5.	Barley	97	92	98	100
6.	Gram	93	92	97	94
7.	Linseed	97	93	99	100
8.	Sugar	93	98	89	94
9.	Rape and Mustard	98	102	100	97
10.	Til	116 ,	143	112	114
11.	Tobacco	104	187	107	99
12 .	Jute	121		127	120
13.	Indigo	121		1	50

Table 4.19

Index of Acreage of Individual Crops in North Bihar in quinquennium, 1922-23 – 1926-27

		North Bihar	Patna Division	Tirhut Division	Bhagalpur Division
1.	Winter Rice	95	99	98	89
2.	Autumn Rice	92	97	90	93
3.	Maize	94	93	91	101
4.	Wheat	102	106	96	104
5.	Barley "	96	90	97	100
6.	Gram	97	99	92	95
7.	Linseed	99	117	92	95
8.	Sugar	97	91	102	94
9.	Rape and Mustard	96	110	91	97
10.	Til	93	104	88	105
11.	Tobacco	104	148	106	102
12.	Jute	153		90	155
13.	Indigo	40			22

Table 4.20
Index of Acreage of Individual Crops in North Bihar in quinquennium, 1927-28 – 1931-32

		North Bihar	Patna Division	Tirhut Division	Bhagalpur Division
1.	Winter Rice	94	93	99	88
2.	Autumn Rice	80	81	79	81
3.	Maize	97	97	92	107
4.	Wheat	103	110	98	102
5.	Barley	96	99	96	98
6.	Gram	96	97	88	97
7.	Linseed	90	115	84	72
8.	Sugar	133	188	103	89
9.	Rape and Mustard	79	110	, 85	72
10.	Til	89	108	85	92
11.	Tobacco	121	286	127	109
12.	Jute	129		244	126
13.	Indigo	11	 .		13

Table 4.21

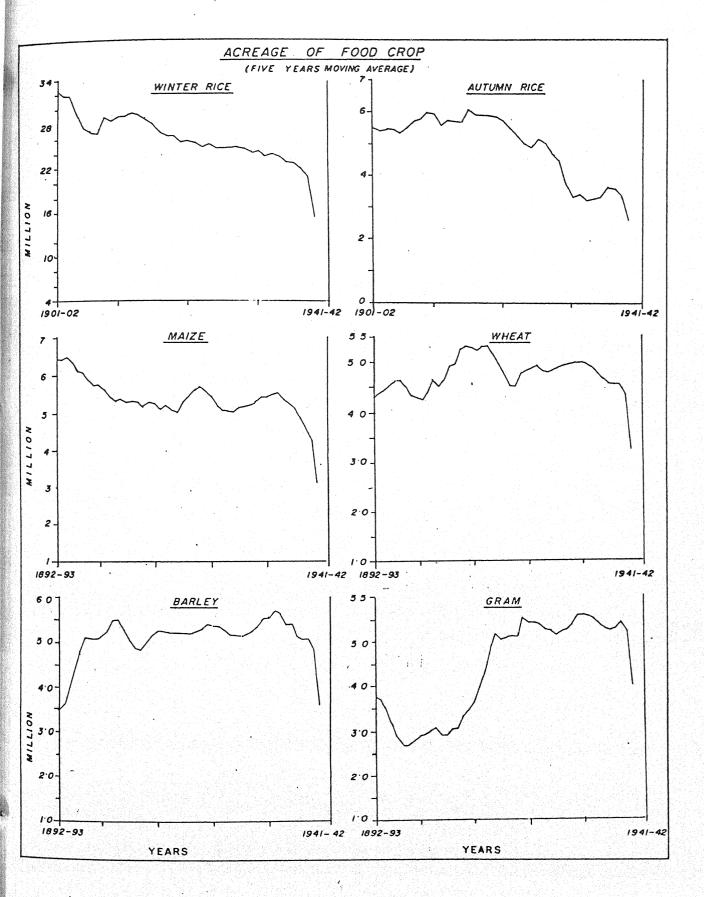
Index of Acreage of Individual Crops in North Bihar in quinquennium, 1932-33 – 1936-37

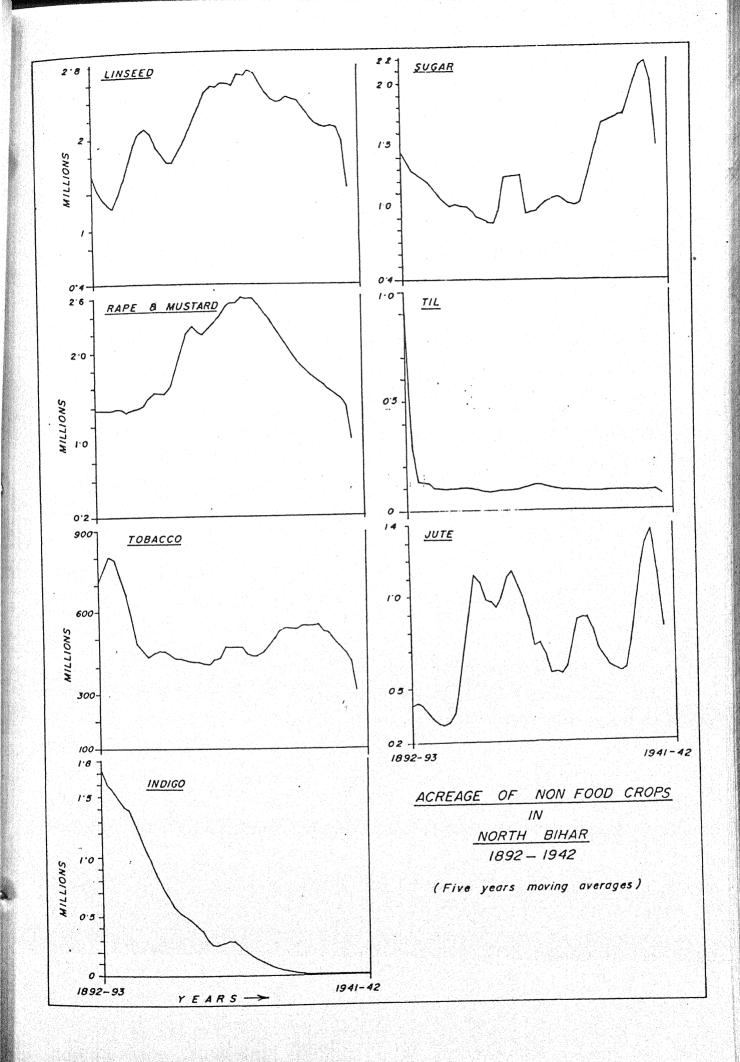
		North Bihar	Patna Division	Tirhut Division	Bhagalpur Division
1.	Winter Rice	90	94	87	89
2.	Autumn Rice	57	88	67	46
3.	Maize	98	89	84	132
4.	Wheat	100	111	90	101
5.	Barley	102	106	101	98
6.	Gram	98	99	85	103
7.	Linseed	82	115	71	70
8.	Sugar	165	140	200	115
9.	Rape and Mustard	65	113	79	53
10.	Til	96	116	91	100
11.	Tobacco	123	258	108	138
12.	Jute	123		184	121
13.	Indigo	2			

Table 4.22

Index of Acreage of Individual Crops in North Bihar in quinquennium, 1937-38 – 1941-42

		North Bihar	Patna Division	Tirhut Division	Bhagalpur Division
1.	Winter Rice	83	84	85	79
2.	Autumn Rice	59	90	80	39
3.	Maize	82	- 93	66	111
4.	Wheat	95	108	86	90
5.	Barley	94	105	90	99
6.	Gram	98	94	117	95
7.	Linseed	78	98	67	83
8.	Sugar	203	206	224	124
9.	Rape and Mustard	57	113	77	41
10.	Til	97	100	98	90
11.	Tobacco	102	274	103	99
12.	Jute	253		221	254
13.	Indigo	3			-





considerable variations while generally increasing. For til, the quinquennial rates had no such definite turning point and were highly fluctuationg.

4.3 Trends in Yield per acre

The trend growth rate of yield per acre of all the crops in North Bihar, except wheat, was negative. In case of wheat the yield per acre rate was 0.2 percent.

In Patna division the yield per acre rates for all the crop except linseed and rape and mustard were negative. In case of the later two crops the rate was 0.4 per cent. The trend rate of yield per acre of wheat crop was also negative. In Tirhut division, the yield per acre rate of only wheat and gram was positive. Except indigo, the rates for all the cash crops were negative. In Bhagalpur division, barley and gram and sugarcane showed positive growth rate of yield per acre. The rest of the crops had negative rates of yield per acre. Interestingly, this was the only division where the trend growth rate of yield per acre of sugarcane was positive.

The yield per acre of winter rice for the North Bihar as a whole declined continuously after the first world war at steady rates. The rate of decline during the depression was higher. Divisional rates followed the general pattern of the region with some exception in the fourth and fifth quinquennia. In these two periods the yield per acre rates in Tirhut division fluctuated at very high rates. The fluctuations in Patna and Bhagalpur were more moderate.

In case of autumn rice the yield per acre of North Bihar showed high rates of fluctuations in the initial three quinquennia, moderate rates of decline in the inter-war period and accelerated rates of decline in the last two quinquennia which were the depression and second world war period respectively.

Tirhut division by and large followed the regional pattern. Patna division followed the regional pattern till the seventh quinquennium. But after that there was deceleration in the rates of decline in its yield per acre rates, with a moderate rise in the eighth quinquenniam. In Bhagalpur division the yield per acre in the division declined all through the ten quinquennia at an accelerated rates

In case of maize the quinquennial rates showed high degree of fluctuations. Both Tirhut and Bhagalpur division showed virtually the same rates of fluctuations. Patna division showed higher fluctuations.

Quinquennial rates of wheat crop has two distinct stages of growth. The first stage was upto the fifth quinquennium during which period it showed fluctuations. After the sixth quinquennium onwards, however, the growth rates showed only slight but steady decline. Quinquennial rates of all the four divisions by and large reflected the regional pattern except that in the initial five quinquennia the rates of fluctuations in all the divisions were higher than the region.

Quinquennial rates of the yield per acre of barley in North Bihar showed fluctuations till the seventh quenquennium. From the eighth quenquennium it fell steadily. All the divisions showed the same pattern.

In case of grams the quinquennial rates of the yield per acre till the fourth quinquennium increased often at accelarated rates. After the fifth quinquennium it fell at more uniform rates, except in the seventh quinquennium when it remained the same. Quinquennial growth rates in Patna and Bhagalpur division reflected the regional rates with minor deviations. On the other hand, Tirhut division showed high fluctuation, reaching its peak in the fifth quinquennium.

Quinquennial rates of sugarcane yield per acre for North Bihar showed two phases. In the first seven quinquennia the rates fluctuated moderately, remaining unchanged in the seventh. In the next three quinquennia the rates fluctuated sharply. This was particularly so in the depression and during the second world war. Pattern in the Patna division showed similar phases as in the region. The rates in Tirhut in the first three quinquennia declined; from fourth to ninth increased; in the last period during the second world war, it declined considerably. In Bhagalpur division the quinquennial rates increased till the ninth quinquennium at varying rates. During the second world war, however, the rate fell sharply.

For linseed the yield per acre rates in North Bihar was marked by high rates of fluctuations till the eighth quinquennium. During the great depression and in the second world war, it did not fluctuate much. Both Patna and Tirhut divisions showed similar pattern of fluctuations in their rates. The rates in Bhagalpur division decreased generally.

Details of quinquennial growth rates of rape and mustard showed high degree of fluctuations. As for divisions, two things can, however, be noted: First, they showed higher rates of fluctuations, particularly during the interwar period. This was particularly

Table 4.23

Annual Percentage Rate of Growth of Individual Crop Yield per Acre in North Bihar, 1892 – 1941

		Percentage to Total Output	North Bihar	Patna Division	Tirhut Division	Bhagalpur Division
1.	Winter Rice	46	- 1.22	- 1.04	- 1.06	- 1.3
2.	Autumn Rice	6	- 1.83	- 1.3	- 2.5	- 1.4
3.	Maize	9	-0.97	-1.4	- 1.08	-0.7
4.	Wheat	8	0.2	- 0.07	0.4	0.4
5.	Barley	8	- 0.05	- 1.2	-0.4	0.01
6.	Gram	10	0.02	-0.4	0.1	0.4
7.	Linseed	4	0.5	0.4	- 0.5	- 1.6
8.	Sugar	3	0.04	- 0.5	-0.01	1.3
9.	Rape and Mustard	3	0.16	0.4	- 0.02	- 0.3
10.	Til	2	-0.48	- 0.5	- 0.2	- 1.2
11.	Tobacco	1	-0.4	- 0.6	-0.1	- 0.8
12.	Jute	1	0.2		-0.1	- 0.1
13.	Indigo		- 6.6		0.8	- 18.1

Note: As in Table 4.1

Table 4.24

Index of Yield Per Acre of Individual Crops in North Bihar in quinquennium, 1892-93 to 1896-97

Crop		North Bihar	Paina Division	Tirhut Division	Bhagalpur Division
1.	Winter Rice				
2.	Autumn Rice				
3.	Maize	. 131	200	157	90
4.	Wheat	92	111	100	63
5.	Barley	103	148	107	58
6.	Gram	70	87	81 .	50
7.	Linseed	95	51	114	115
8.	Sugar	97	101	119	50
9.	Rape and Mustard	108	125	103	108
10.	Til	97	117	92	89
11.	Tobacco	86	86	81	94
12.	Jute	149		71	153
13.	Indigo	288		76	225

Table 4.25

Index of Yield Per Acre of Individual Crops in North Bihar in quinquennium, 1897-98 to 1901-02

		North Bihar	Patna Division	Tirhut Division	Bhagalpur Division
1.	Winter Rice			-	
2.	Autumn Rice				
3.	Maize	99	186	152	88
4.	Wheat	68	74	69	59
5.	Barley	108	150	102	110
6.	Gram	72	87	. 68	57
7.	Linseed	77	57	84	109
8.	Sugar	96	98	115	62
9.	Rape and Mustard	111	122	114	109
10.	Til	118	155	106	147
11.	Tobacco	91	119	81	111
12.	Jute	131		164	128
13.	Indigo	280		106	302

Table 4.26

Index of Yield Per Acre of Individual Crops in North Bihar in quinquennium, 1902-03 to 1906-07

		North Bihar	Patna Division	Tirhut Division	Bhagalpur Division
1.	Winter Rice	112	105	113	115
2.	Autumn Rice	111	138	100	121
3.	Maize	79	123	114	81
4.	Wheat	85	92	77	89
5.	Barley	93	108	. 90	93
6.	Gram	102	104	91	103
7.	Linseed	91	103	89	88
8.	Sugar	100	105	102	84
9.	Rape and Mustard	97	102	90	99
10.	Til	97	130	82	96
11.	Tobacco	95	94	87	103
12.	Jute	69		164	64
13.	Indigo	294		68	294

Table 4.27
Index of Yield of Individual Crops in North Bihar in quinquennium,1907-08 to 1911-12

		North Bihar	Patna Division	Tirhut Division	Bhagalpur Division
1.	Winter Rice	144	94	220	116
2.	Autumn Rice	56	69	51	60
3.	Maize	89	155	131	85
4.	Wheat	119	152	100	94
5.	Barley	101	103	99	107
6.	Gram	112	116	108	107
7.	Linseed	88	80	88	90
8.	Sugar	94	93	104	73
9.	Rape and Mustard	132	90	199	92
10.	Til	108	72	131	91
11.	Tobacco	111	111	106	117
12.	Jute	102		74	103
13.	Indigo	269		122	299

Table 4.28

Index of Yield Per Acre of Individual Crops in North Bihar in quinquennium, 1912-13 to 1916-17

	<u>ka kata kati bili pata dan bili bili bili bili bili bili bili bil</u>					
		North Bihar	Patna Division	Tirhut Division	Bhagalpur Division	
1.	Winter Rice	118	108	122	. 123	
2.	Autumn Rice	114	139	99	132	
3.	Maize	79	94	113	87	
4.	Wheat	95	104	95	86	
5.	Barley	101	110	100	94	
6.	Gram	107	106	129	91	
7.	Linseed	107	121	. 103	92	
8.	Sugar	93	95	113	65	
9.	Rape and Mustard	99	118	97	99	
10.	Til	109	143	112	90	
11.	Tobacco	96	111	97	93	
12.	Jute	125		110	126	
13.	Indigo	306		114	237	

Table 4.29

Index of Yield Per Acre of Individual Crops in North Bihar in quinquennium, 1917-18 to 1921-22

(Base: 1920-21 to 1922-23)

		North Bihar	Patna Division	Tirhut Division	Bhagalpur Division
1.	Winter Rice	105	109	102	105
2.	Autumn Rice	103	106	103	104
3.	Maize	64	79	96	64
4.	Wheat	90	96	86	88
5.	Barley	93	99	89	109
6.	Gram	97	102	90	89
7.	Linseed	95	101	92	92
8.	Sugar	100	101	106	83
9.	Rape and Mustard	95	104	85	99
10.	Til	109	98	117	92
11.	Tobacco	90	. 105	91	89
12.	Jute	117		108	117
13.	Indigo	379`		95	289

Table 4.30

Index of Yield Per Acre of Individual Crops in North Bihar in quinquennium, 1922-23 to 1926-27

		North Bihar	Patna Division	Tirhut Division	Bhagalpur Division
1.	Winter Rice	99	93	109	89
2.	Autumn Rice	93	97	88	98
3.	Maize	80	114	112	86
4.	Wheat	94	100	97	84
5.	Barley	102	103	103	89
6.	Gram	97	101	103	86
7.	Linseed	96	99	101	81
8.	Sugar	100	108	103	87
9.	Rape and Mustard	100	108	109	94
10.	Til	97	78	104	85
11,	Tobacco	94	95	97	90
12.	Jute	112		100	113
13.	Indigo	963		120	922

Table 31

Per dere

Index of Yield of Individual Crops in North Bihar

in quinquennium,

1927-28 to 1931-32

Crop		North Bihar	Patna Division	Tirhut Division	Bhagalpur Division
1.	Winter Rice	99	89	108	98
2.	Autumn Rice	90	101	75	127
3.	Maize	75	116	107	78
4.	Wheat	89	86	97	82
5.	Barley	93	88	96	82
б.	Gram	87	85	99	85
7.	Linseed	67	72	70	55
8.	Sugar	79	63	108	87
9.	Rape and Mustard	109	123	115	105
10.	Til	93	110	99	68
11.	Tobacco	98	86	103	89
12.	Jute	100		103	99
13.	Indigo	3368		153	ERR

Table 4.32

Index of Yield Per Acre of Individual Crops in North Bihar in quinquennium, 1932-33 to 1936-37

(Base: 1920-21 to 1922-23)

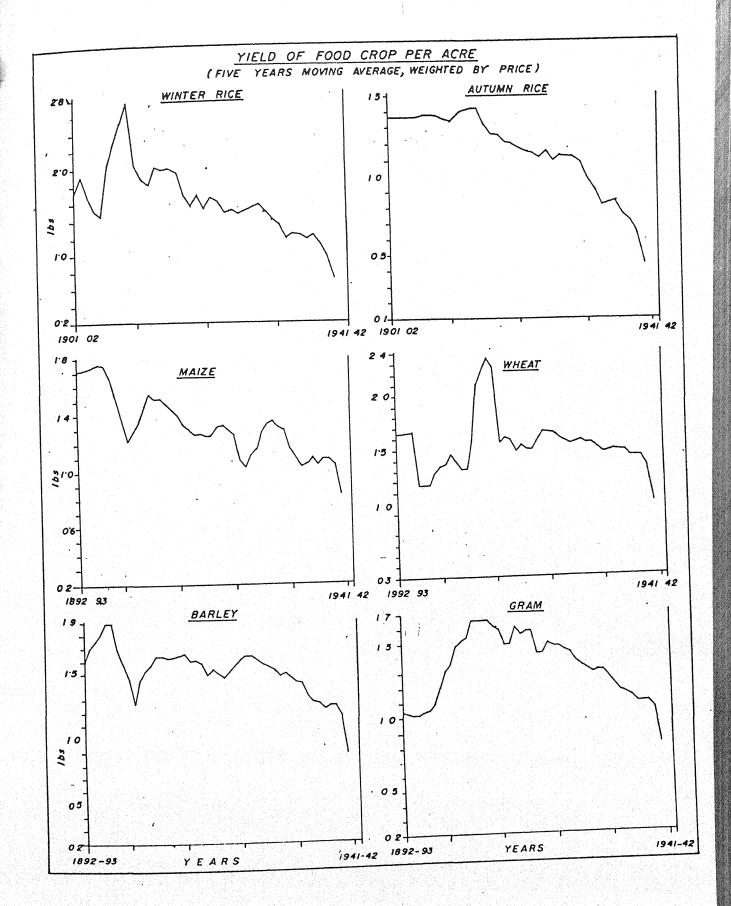
		North Bihar	Paina Division	Tirhut Division	Bhagalpur Division
1.	Winter Rice	74	69	80	73
2.	Autumn Rice	73	96	60	85
3.	Maize	62	105	89	62
4.	Wheat	87	86	90	85
5.	Barley	82	81	82	79
6.	Gram	78	78	82	75
7.	Linseed	73	72	80	59
8.	Sugar	126	138	132	110
9.	Rape and Mustard	103	125	108	97
10.	Til	81	114	79	70
11.	Tobacco	76	73	78	75
12.	Jute	85		104	83
13.	Indigo				

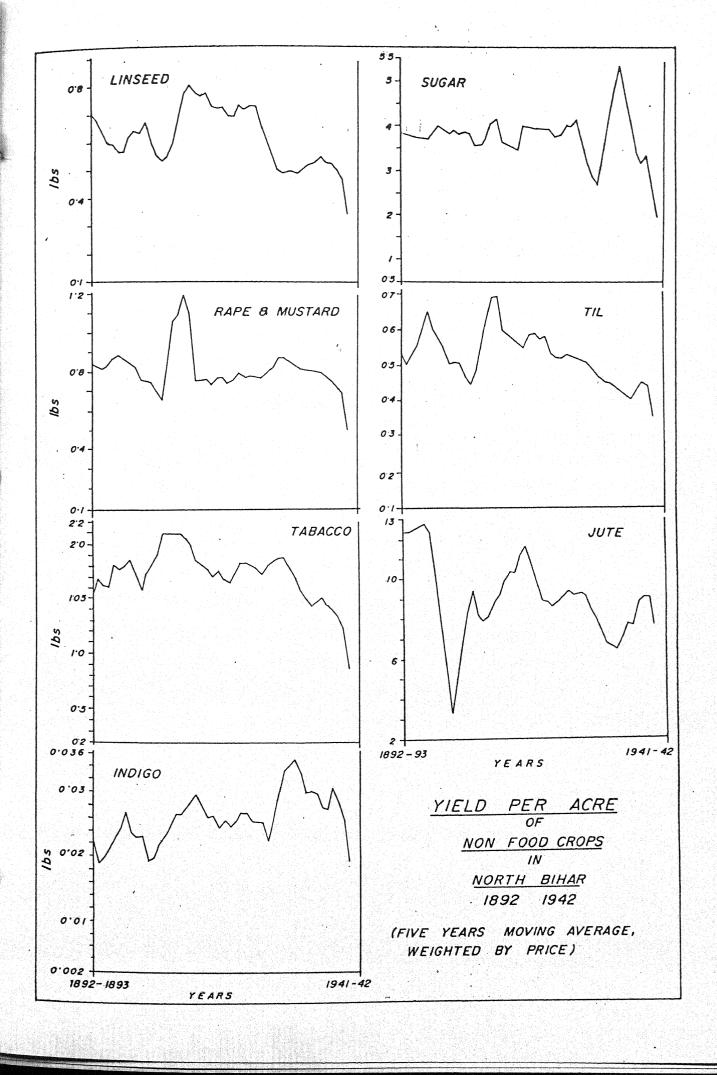
Table 4.33

Index of Yield Per Acre of Individual Crops in North Bihar in quinquennium, 1937-38 to 1926-27

(Base: 1920-21 to 1922-23)

		North Bihar	Patna Division	Tirhut Division	Bhagalpur Division
1.	Winter Rice	66	62	74	61
2.	Autumn Rice	58	94	48	69
3.	Maize	65	99	98	63
4.	Wheat	83	80	89	79
5.	Barley	77	79	79	69
6.	Gram	74	72	77	74
7.	Linseed	70	69	80	52
8.	Sugar	85	7 5	101	88
9.	Rape and Mustard	94	104	102	85
10.	Til	85	93 ຸ	89	63
11.	Tobacco	69	68	70	67
12.	Jute	112		93	113
13.	Indigo				





so in case of the Patna division. Second, most of these divisions showed sharp fall in their rates during the depression and second world war, except in Patna division during the ninth quinquennium when it experienced mild increase.

Quinquennial growth rates of yield per acre of jutes showed high rates of fluctuation. During the first and second world war the rates had increased significantly under the impact of high market prices. In North Bihar the primary jute growing regions were Bhagalpur and Tirhut division. Bhagalpur division closely matched the regional pattern. Tirhut division, however, showed two important deviations: First it showed high rates of increase and decrease in its yield in the four quinquennia before the first world war. Second, it showed a general fall in the productivity rates of the jute crop in the region.

Quinquennial rates of yield per acre of Tobacco in North Bihar showed moderate fluctuations while falling generally. Tirbut and Bhagalpur by and large conformed to the regional pattern. In Patna division, on the other hand, the rates fluctuated till the end of the first world war and thereafter it fell continuously till the tenth quinqunnium.

Yield per acre rates for til show fluctuated moderately in the initial period. In the later stage, till the beginning of the second world war, it decreased. The rates in Patna division, on the other hand, showed very high degree of fluctuations throughout the period. The other two divisions by and large followed the regional pattern.

The yield per acre, therefore, has the following pattern: First, the annual percentage growth rates of yield per acre of all the crops except wheat were negative. In case of wheat the rate 0.2 per cent was only barely positive. Second, in the division also the rates were mostly negative, only exceptions were in the case of rape and mustard in Patna division, wheat and indigo in Tirhut division; and wheat, barley and gram in Bhagalpur division for which the rates were barely positive. Third, the specific feature of the per acre productivity of the crops in North Bihar was the periodic fluctuation.

Conclusions in this chapter can, therefore, be summed up: First, the annual percentage rate of growth of output of individual crops showed the following things:

a) for the winter rice, autumn rice, maize, and also minor food crops like barley, the annual percentage rate of growth of their production was negative; b) for wheat and gram the rates were barlely positive; c) for sugar, linseed, rape and mustard and jute the annual percentage growth rates of their production were positive; d) For til, tobacco and indigo, the rates were negative. The indigo cultivation disappeared in the 1910.

Second, the annual percentage growth rate of area had the following feature:

a) First, the annual percentage growth rates of area of winter rice, autumn rice and maize were negative; b) for as wheat, barley, and gram the rates were barely positive; c) Third, among the cash crops the growth rates for sugarcane, linseed, rape and mustard and jute were positive; and d) fourth, for the cash crops like til, tobacco and indigo the rates were negative.

Third, yield per acre rate for the crops were negative except in case of wheat which was barely positive.

Fourth, quinquennial growth rates of the output and also area showed three things: a) First, the rates showed fluctuations from one period to another; b) the turning point in the growth of area and output of major crops including rice and wheat was the decade between 1907 and 1917. In case of sugarcane production the upturn was evident from the period between 1907-08 to 1911-12. But the real spurt was in the period between 1932-33 and 1936-37.

Chapter V

VILLAGE FUNCTIONARIES

In this chapter we examine the nature of the labour process in North Bihar during the colonial period. In the Marxist conception of the labour process there are three basic elements: (a) work (activity) (b) nature and (c) tools (Marx, 1976: 284; Althusser and Balibar, 1968: 241). The way they unite determines the real relations of the production process.

At the theoretical level, a specific relation of production is usually identified with a specific form of labour process; e.g. slave labour with slavery; serf with the feudal society; and free labour with the capitalist relation. While at the theoretical abstract level this identification is perfectly acceptable, in real social formations, particularly in transitional ones, many of these different forms of labour co-exist.

In the rural societies of North Bihar one finds simultaneous existence of (a) family labour, (b) bonded labour, (c) artisans and cultivators working as agricultural labour and (d) casual labour. These various forms of labour have their own specificity. At the same time they often overlap. The nature of their material relation depends on the concrete situation of the society under study. For example, if a rural society is subjected to the process of capitalist style differentiation then family forms will disintegrate and family labour will join the ranks of free labour. If, on the other hand, the process of differentiation remains stunted for some reasons then free farm labour might on the other hand lease in land and join the ranks of family labour or, failing that, they might opt for the life of bonded labour. The direction and nature of such changes is determined by the relative positions of classes and changes in those positions as a result of economic and social changes and class conflicts (Brenner, 1987).

In transitional peasant societies certain specific features may be observed. First, the labour market remains fragmented. Second, in such labour markets the market relations, often thrust from above, co-exist with non-market relations, each affecting the other in this co-existence. Third, it is marked by a dominant presence of family labour, which (Bloch, 1967: 230-243; Bharadwaj, 1974) has pertinently been described as the preserve of natural economy. Fourth, diverse forms, mode and type of allowances and wage payments characterise this labour market.

In recent times there has been tremendous proliferation of literature on the study of rural labour and labour market in this country. Benoy Choudhury (1982) has made detailed study of the system of agricultural labour in Eastern India including North Bihar under the colonial rule. Choudhury tends to argue that with commercialisation of agriculture in Eastern India during the British period the casual labour was increasingly replaced by the bonded labour as dominant form of labour. The linear nature of Chaudhary's argument, however understresses the complexities of labour relations and its changes in the rural society under the colonial rules which we tried to stress.

The nineteenth century and early twentieth century labour relations in North Bihar had some specific features of their own. It was common, for example, to find kamias (basically bonded ploughmen) working as reapers alongside majdurs (casual labour). A lohar (blacksmith) repaired plough for his jajman for traditionally determined crop payments. The jajman, on the other hand, would want the lohar to perform his services for lesser payments. Under this condition of surplus labour, these artisans, such as lohars, chamar, had to work as agricultural labour to supplement their artisanal income. In some cases, as in case of jolahas (weaver), the dispossessed artisans became part of the agricultural labour force while continuing to operate their dilapidated looms as off-season, part time work, supplying the needs of the village folk.

The demand for labour in agriculture depends on the cropping pattern which is a reflection of soil condition, land use, production technique etc (Bharadwaj, 1974: 18 and 84). In North Bihar all these were critically dependent on the monsoon, which determined not only the agricultural operation but also the whole system of work and cycles of life in rural society.

This dependence of agricultural operation and through that the demand for labour on rainfall is the specific feature of pre-capitalist agriculture of North Bihar or, for that matter, of any agriculture in any such rural society.

Marx provides a conceptual framework for the analysis of this sway of nature in agriculture in such society. In industry, Marx argues, the production time coincides with labour time. But in agriculture the production time is greater than labour time

Patel (1952); Kumar (1965); Choudhury (1975); Choudhury (1977); Amin (1984); Bhattacharya (1985); Breman (1979); Ghosh and Dutta (1977).

(Marx, 1973). In agriculture the production time has two periods: (1) period in which the capital exists in the labour process and (2) period in which its form of existence - unfinished product -is handed over to the sway of nature (Marx, 1973: 317). In this second period, in agriculture the capital is tied to the production without adding anything to the total product as no labour power is expended during this period. In the cultivation of rice, for example, it happens in the period between transplanting of the crop and its harvesting.

In pre-capitalist agriculture this has certain important implications.² First, the relative rate of return becomes less in agriculture which makes agriculture unattractive to capital in the stage of its initial accummulation. Second, the cultivators need money during this working period of production time. The less resourceful or the less fortunate have to take loan during this period (Amin, 1984). Third, the labourers remain without work or work less during this period. This situation often induces them to accept the life of bondage of one type or the other in preference to the life of free labour as that enables them to survive during these lean, workless months. The whole rural society spends its days during this period praying for rain at appropriate time in appropriate measure.

In Table 5.1 we have given this relationship between monthwise rainfall, agricultural operation and labour demand in a somewhat crude form. The demand for labour is presented in the form of average day hours of work in a particular season.

North Bihar, as indeed the whole of Bihar province, has three main agricultural seasons: <u>Bhadoi</u>, <u>Aghani</u> and <u>Rabi</u>.³ The agricultural operation begin in <u>Jeth</u>, i.e. in the <u>Rohini</u> asterism.⁴ If it rains in <u>Baisakh</u>, it is a good presage. It means the beginning of the preparation of paddy field.

<u>Jeth</u> (May-June) and <u>Akharh</u> (June-July) are months of hectic activities in the villages. <u>Lohar</u> repairs the plough, and also sells a new one. <u>Chamar</u> repairs leather

^{2.} Marx's analysis is based on capitalist society. But his concept is equally applicable for pre-capitalist societies.

^{3. &}lt;u>Bhadoi</u> and <u>Aghani</u> draw their names from their reaping months. <u>Rabi</u> is a persian name, meaning spring. See C.J. Sterension Moore, <u>Final Report on the Survey and Settlement Operation in Muzaffarpur District</u>, 1892-1899, (1961).

^{4.} In Bihar, the cultivators follow lunar asterism for agricultural operation. It consists of 27 <u>nachatras</u> or lunar asterism, i.e. 2 1/4 asterism in each month. The asterism are not of equal length. The <u>Hatiya</u> is largest with 16 lunar days; and the others range from 13 lunar days in dry months to 15 in the wet months. See Grierson(1975: 274-275).

Table 5.1

Lunar asterism	English Month	Autumr	Crop Pe Summer	eriod Winter S	Spring	Average rainfall	Average Day hours of work
Aswini	April	P	-	•	Н	2	72
Bharni	May	S	<u>-</u>	<u>-</u> 1	P	4	4-8
Krittika	4						
Rohini	June	T	S	P		6	12-13
Mirgsira	44						
Aradra	July	W	w	S	•	10	8-10
Punarbas		• • • · · · · · · · · · · · · · · · · ·					
Pukh	44						
Asres	August	W	Н	T		>10	4
Haggha	4						
Purba Phaguni							
Utra Phaguni	September	Н		W	P	8	4
Hathiya	4						
Chitra	October			Н	P	<4	10
Swati	4				in Page 1		
Bisakha	November			Н	S	<2	2 or less
Anuradha							
Jestha							
Mul	December			H	w	1	2-4
Purba Kharb							
Utra Kharb	January				W	<2	2-4
Sawan							
Dhanishtha	February						
Satbhikha				(A E
Purab Bhdrapad	l March				H		4-5
Uttar Bhdrapad							
Reoti	하하면 보고 있는 왕 왕이다. 1185년 - 128일 - 128일 - 128일						

Note: 1. P = Ploughing; S = Sowing; T = Transplanting; W = Weeding; H = Harvesting.

2. Lunar asterism does not exactly tally with their corresponding English months because of difficulty of presentation.

Sources : Prepared from (1) Geddes (1982: 175-176); (2) Survey and Settlement Report of Muzaffarpur; (3) Grierson (1885).

straps of the yokes. <u>Barhi</u> does woodworks of the plough. <u>Kamias</u> bond is renewed. In the field the ploughing for <u>Bhadoi</u> rice, <u>kodo makai</u> and <u>pluses</u> begins. The field preparation for <u>Aghani</u> rice and other <u>Aghani</u> crops also begins during this period. In short, the jobs are there for everybody during these months of June-July. The whole village is active (Bhattacharya, 1985). <u>Patwari</u> keeps village account; <u>Gorait</u> watches crop; <u>Barahil</u> collects rent.

From <u>Bhado</u> (August-September), a relative calm sets in. It continues through <u>Asin</u> (September-October) to the beginning of <u>Kartik</u> (October-November). During these period in some areas <u>Bhadoi</u> crop is cut. But the <u>Aghani</u> is maturing in the field. Only activity is in the sugarcane field where the labourers are in demand to tend the maturing crop. In some areas the job of preparing <u>rabi</u> fields also begins.

On the whole, this is a slack season. The cultivators and the labouring classes wait and pray for rain. In <u>Sawan</u> (July-August) rain is needed. But in <u>Bhado</u> (August-September) it must rain. For crops like rice, pluses and standing sugarcane, the <u>Hathiya</u> rain in <u>Asin</u> (September-October) is highly beneficial. Proverb says: <u>Hathiya barse tin hot ba, sakkar sali mas. Hathiya barse tin jat ba, til kodo, kapas</u> (Rain in Hathiya produces three things - sugarcane, rice and pulse; and destroy three things — seasum, Kodo, and Cotton) (Grierson, 1885: 283).

In Aghan (November-December) also the rain is needed. It is good for Rabi crop and therefore, it means work till Pus (December-January). In some area, the work goes on upto even Chait (February-March). In Aghan (November-December) and in Pus (December-January) the activity returns to the village. The Aghani rice, the major crop, is cut between September and December and heaped in the field during this period. Barhis, lohars, chamars, hajjams, dhobi, bhats, all get their rasum (share) for the work done earlier; and the labourers get their wages. Village officials also come to take their share and their cess (abwab). After that the crop is brought to the khalians for threshing. At this stage the patwari (accountant), the gorait (watchman), the barahil (peon), and kumhar (potter) etc. are all paid their due. The festival season begins now. From sukhrati (Devali) till deb uthan, the village priests too have their hands full and get their shares in the surplus in the form of gifts.

In different season one finds all functionaries doing their socially assigned work: village officials, artisans, cultivating labourers, the <u>Kamias</u> and the <u>maidurs</u> or casual

labourers have their specifically assigned jobs at specific time of the year and the work of one depends on the work of others. But, above all, the timing of the work and also the availability of jobs is ultimately dependent on nature. If the rain fails, the ploughmen could not get employment even if the artisans have done their repair work properly.

In this chapter we wil take up the village officials for a detailed study. The village officials create conditions of existence. Two types of villege officials can be identified in any village of North Bihar: (1) Those who work in the zamindari establishment and get paid directly by it. Gomostah, Amin (clerk), Salis (mediator), Juribkas (measurer) etc. falls into this category and (2) Those who work for the village and get paid from the village surpluses. These differences are, however, only notional as all the officials are ultimately paid from the village surpluses. Some functionaries like Gomasta get salary from the Zamindari establishments and perquisites another expression for forced exgtra collection from village tenants.

Further they were under the effective control of the zamindars in the final analysis. Effort were made to bring the <u>Patwaris</u>, of the village accountant, under the Government control under the Regulation XII of 1877. But they remained virtually the zemandars men. Notes written by the district officials of Tirhut, Purnea, Monghyr and Champaran repeatedly expressed their frustration over their inability to make <u>Patwari</u> listen to their bidding.

The allowances of these officials were paid at certain rates determined by customs. These rates are available in Buchanan's Accounts, Hunter's Statistical Accounts, Settlement Reports and the district Gazatteers. These rates are strictly speaking rates of allowance of village officials of different individual estates. The district rates are not available. Further, these information are not collected from specific regions and consistently over long time which, therefore, prevents any time series analysis of these data.

From the ensemble of this scattered information, one can make the following observations: the village officials income come from three different sources: (1) Cash: it is usually paid by Zamindars on monthly or annual basis. (2) crop or grain (after thre shing): it is usually some percentage share of the crop harvested and threshed. (3) Land: it is usually rent free and often given along with some rented land. (4) Perquisites: it includes abwabs and pilferage.

Cash payments are usually on a monthly basis. But sometimes and in some area it is paid annually also. For example in the 1870 in the Patna districts, <u>Gomashtas</u> and <u>Patwaris</u> were being paid annually (Martin, 1838, II: 234).

The rates of cash wages were different in different areas. In Pargana Bhagalpur the rates of cash wages was 1/4 to 1/2 anas per rupees of money rent collected by <u>Patwari</u> (Martin, 1838, II: 234), in some other areas of Bhagalpur it is 1 and 1/2 anas per year from every house; in Shahabad it is 3 pice 5 to 1 anna per rupees of rent collected from ryots; in Saran Rs.4 to Rs.2 per village according to size and importance of the village. In 1910 in Narhan estate in the Monghyr district, the <u>Patwari's</u> wage rates were found to be 1 pice per rupees rent collected from the tenant along with Rs.12 to Rs.2 in cash per month; in Charaparan they were paid Rs.48 to Rs.24 per month. Thus primarily the <u>Patwaris</u> total cash income depended on his rent collection: the more rent he collects the more income he has. Besides this, in most cases he has some fixed salary from his landlord.

The kind part of the allowances is usually some specified portion of the undivided crop; the smaller officials getting less than the bigger ones. Buchanan found that in Pargana Bhagalpur Patwaris kind allowance was 2 and 1/2 sers of each bigha of land rented by tenant along with 3 sers of grain per maund of grain collected by landlord. The Gorait got less, only 2 chattaks per maund of rented land 7. O'Mally also reported that in Patna district this allowances was expressed as some chattaks per maund of grain. In Patna Gorait got 6 chattaks of grain per maund; in Gaya 2 chattaks per maund of undevided grain; in Shahabad 2 Kachcha paseri per 100 maunds (approximately 1/2 percent the total). For barahil the rates in Patna was 10 Chattaks grain per maund; in Gay 2 chattaks per maund (Martin, 1838, II: 234) For Sonar the rates are different: it is 1 to 1/4 ser per every rupees of grain sold and it was paid by the purchaser. In short, it is clearly evident that (1) the rates vary from area to area; (2) the higher officials have higher rates and (3) the burden is mostly borne by the tenants.

6. Reports on the Survey and Settlement, respective districts

B. O'Maly, Bihar District Gazetters, various districts,

^{5.} Four pices makes one ana.

^{7.} O'Mally, <u>Bihar District Gazetters</u>, various districts. <u>Chattak</u> is a local weight, weighing 1/16 of a ser, which is 1/40th of a maund.

Village officials were also given land. It was usually rent free when it was part of their job condition. The size of the land and the conditions of possession of land varied from area to area. In Patna Gorait was given 1/2 acre rent free land and Chaukidar almost 1 bigha (0.6 acre) or less (Martin, 1838, I:315). In Bhagalpur (Huntar, 1877, XI:96 and 97), the Pauniya (Chamar_drum beater) was also given rent free land. Usually the land was given to the lower functionaries and its size varied from a tiny plots of 0.4 acre (Hunter, 1877, XIV: 108) to as large as 8 acre (Martin, 1838, I:319).

Besides this rent free land, the village functionaries were offen allowed rented land. The size of the rented land and rent again ware highly variable. The usual measurement was as much as the plough can cultivate. But it could be anything. Buchanan, for example, found that in some Zamindari establishment in Behar, (in Patna district) the <u>Peyadahs</u> (guards) were given as much rented land as he can cultivate. In the district of Behar, again, where the rent free land was large, no rented land was given (Martin, 1838, II: 231).

Payment to village officials were made from undevided crops. This was the general norm. The actual procedure of assessment of their share and their forms of and time of payment was different for different forms of tenancies. In <u>palaidari</u> (Martin, 1838, I: 374) the village officials were paid (after the artisans) from the undevided grains before its division between tenants. In <u>danabandi</u> the allowance of village officials were estimated and the tenanant was given 5 to 10 percent of the estimated crops beforeh and for subsequent payment to the village officials. This was the norm. But in actual practice there were exceptions. Buahanan found in Pargana Bhagalpur that the <u>Patwari</u> got paid mainly by the tenants (Grierson, 1893: 74-75). The landlords paid nothing.

There are, however, certain types of payments which were customarily paid by the tenants only. For example in the Patna district <u>amin</u> (Chief Surveyor) <u>salis</u> (arbitrator), and <u>jaribkash</u> (chainman) etc., all servents of Zamindars, were paid by the vilage tenents (Martin, 1838, II: 234 and 235). In Monghyr district, it had been recorded that both landlords and tenants paid small amount to the <u>amins</u> (chief surveyar) for his job. <u>Salis</u> (arbitrator) got grain from both landlord and tenant. <u>Bathwara</u> gots pittance from the tenants only (Hunter, 1876, XI: 97).

Perquisites is another source of income of the village officials. It is, however, an euphemesim for <u>abawabs</u> literally meaning illigal cess. The law defines 'abwab' as tax

items of pre British days which have either been abolished or consolidated with the land revenue by the British State (Hunter, 1876, XV: 79). But these perquisites mentioned here included taxes which were declared illigal, but were continued to be collected by the zamindars. To the colonial administration these perquisites were illigal imposition by Zamindars (Wilson, 1855: 2-3). But the ryots paid them. The ryots did not oppose because it (abwab) had the sanction of custom. In many instances the British officials have described these as customary cesses.9

<u>Patwaris</u> and <u>Gomartas</u> were the main appropriator of abwabs. <u>Gomastas</u> took perquisites in Bhagalpur, Purnea, Tirhut and Patna district and <u>mangam</u> in Monghyr district.¹⁰ The other categories of village officials who took <u>abwab</u> in considerable measure were <u>gorait</u> (watchman) <u>kotwal</u> or <u>chowkidar</u>, <u>barahil</u> (bailif), and weighman (Hunter, 1877, XV: 121-127) (termed variously in various districts).

The <u>abwabs</u> are usually related to crops or grain (i.e. after harvest); it is usually some specific portion of the crop or grain. <u>Mangam</u> is, however, collected in Patna district at the rate of 9 and 1/2 ser per <u>bigha</u> of land in Patna district and at the rate of 12 and 1/2 ser per plough in Gaya and Monghyr district. Also, the <u>gorait</u> of South Monghyr district got his <u>jagirdar</u> in the form of rent free land. This linking of <u>abwabs</u> to crops make it flexible and elastic to crop production.

Travelling through Patna district in the early nineteenth century, Buchanan found that <u>Gomastas</u> and <u>Patwaris</u> lived in considerable affluence, much above their incomes as calculated by him. He found that illegal exactions were their main source of opulence (Martin, 1838: I, 234). In his statistical accounts of Patna district Hunter said that the village <u>Gomastas</u> and <u>Patwaris</u> cheated the <u>maliks</u> (Zamindars) by manipulating their accounts, and the ryots by imposition. Often they have been described as litigants, quarrelsome and provocateur of petty cases among the ryots for wrenching out extra farthings of commission from the ryots (Hunter, 1827, XI: 96).

The lesser functionaries such <u>choukidars</u>, <u>gorait</u> and <u>barahils</u> also took on these attitudes of <u>Gomastas</u> and <u>Patwari</u>. The ryots paid them in order to keep them away from making mischief. But the later wanted more. <u>Chowkidars</u> were most notorious of the

See, for example, J.A. Hubbak, <u>Final Report on the Survey and Settlement Operations in the district of Shababad</u> (1919).

^{10.} Hunter also provides various detailed accounts of abwabs in various issues of his statistical accounts.

village officials. Their depredations made life and property of the cultivating classes insecured (Grierson, 1890: 282)

In summary the village officials can then be functionally devided into a) officials of Zamindar's establishment and b) officials of village. But in reality all of them acted as Zamindar's men and shared in the surplus extracted from the peasants. Second, the village officials' incomes came from (i) legal payments, cash or kinds; (ii) land assigned to them (iii) customary deductions, and (iv) abwabs. Third, while subservient to the Zamindars as employees, village officials often adopted illegal means to amass wealth from the estate of the masters, and extracted illegal rasums and abwabs.

Chapter VI

ARTISANS

In North Bihar, rural artisans maintain conditions for agricultural production. The <u>barhi</u> (Carpenter) makes the plough; the <u>lohar</u> (blacksmith) repairs ploughs and makes other tools and implements such as <u>hansua</u> (sickle), <u>kodari</u> (spade) etc. Besides helping agricultural production in these ways, many of these artisans were engaged in agricultural labour.

The artisan's current condition in North Bihar is at least partly the product of the de-industrialisation during the British rule. There were many scholars including Thorner who pointed out de-industrialisation as a consequence of the colonial trade regime. Bagchi specifically discussed the situation in gangetic Bihar and gave this aspects of colonialism a rigorous theoritical formulation (Bagchi, 1976 b). Basing his argument on the occupational data from Buchanan's diary and the 1901 census on the North Bihar plains, Bagchi has shown (a) that there was a fall in the proportion of population employed in industry, and (b) that de-industrialisation affected first the traditional industries oriented towards exports and in export zones and later its impact was felt in segments of industries geared to internal production.

This process of de-industrialisation had quite a few implications for the vast rural artisans of North Bihar: not only did they loose their traditional occupations but in cases in which they maintained their traditional occupations they were continually subjected to the threat of loss of employment and income in bouts of market fluctuations. Many of them became simply agricultural labour dependent on land since alternative employment opertunitics did not develop in the region. Many of them migrated to the factories and mines in and around Calcutta, Eastern Bengal and Southern Bihar. But employment in this region did not expand fast enough to absorve these displaced workers.

Thorner's study was confined to 1881 to 1931. See Thorner "De-industrialisation' in India, 1881-1931", in Thorner and Thorner (1962).

See also, Chattapadhyay (1975) Krishnamurthy (1976)
 For theoretical formulation of the concept of de-industrialisation, see Bagchi (1976 a); also see in this connection Krishnamurthy (1976); Viczany (1979) Bagchi (1979); Krishnamurthy revised his view about Bagchi's formulation in "De-industrialisation in Gangetic Bihar: A case study of the Cotton Textile Industry, 1809-1898 (cyclostyled).

Table 6.1

Occupation Pattern of Artisan Castes (Males): 1901 to 1931 (Per cent)

			-	1901				1911			1921	21			16	1931	
		Caste Profe- ssion	Cultt- vators	Caste Cultt- Labour Others Profe- vators ssion	Others	Caste Profe- ssion	Caste Culti- Profe- Vators ssion	Labour Others	Others	Caste Profe ssion	Culti- vators	Labour	Others	Caste Profe- ssion	Culti- vators	Labour	Others
Li.	I. Barhi	32.5	54.7	5.5	39.8	36.8	45.5	10.3	7.4	33.0	50.5	12.3	4.3	30.8	47.4	11.3	10.5
	Chamar	5.7	65.0	17.0	. 18.0	11.8	33.7	46.8	7.7	9.4	38.5	48.2	3.9	9.4	33.7	43.7	13.2
က်	Dhoba	46.0	41.7	26.0	7.3	48.0	37.0	11.0	4.0	41.4	45.5	11.4	1.2	42.0	40.2	13.11	4.6
4	Dom	22.2	40.5	24.1	35.5	79.4	7.7	7.9	5.1				ı	1	ı	1) I
ro.	5. Hajjam	40.8	46.3	48.6	5.1	7.0	42.9	9.0	41.2	41.7.	47.9	8.7	108	41.2	44.4	9.4	2.0
	6. Johaha	27.9	50.3	11.8	37.9	18.5	45.1	22.8	13.6	15.0	52.9	23.8	8.3	16.6	49.3	17.0	17.1
7.	7. Kahar	23.8	53.8	31.2	15.0	22.8	31.6	35.0	10.6	ŀ	1				1	1	
 œ	8. Kumhar	39.9	42.9	40.7	16.4	52.4	35.8	7.5	4.2	45.3	44.9	7.9	2.0	40.1	46.3	6.0	4.3
	9. Lohar	26.1	53.7	7.0	39.4	23.9	52.7	9.0	14.3		i	· •			1		1
	Nunia	5.9	69.7	14.6	15.8	20.5	48.8	21.9	7.	14.2	61.3	17.3	7.3				. 1
Π.	Sonar	42.6	34.2	3.4	62.4	38.0	27.6	6.1	28.3		ï	1		1	1	1	1
12.	12. Tanti/ Tantwa	13.4	55.2	13.5	31.3	6.5	33.7	48.2	11.6	12.7	39.5	42.2	5. 5.	6.0	36.6	39.4	17.9
13. '	Tell	30.3	53.6	5.8	40.7	22.5	50.7	9.9	16.9	19.6	56.9	9.3	14.2	20.6	54.8	10.0	14.7

: 'Others' include all profession in the census other that cultivators and labourers, Labourers includes domestic and unspecified labour also.

Census 1901, Vol 64, Table XVI, Part A and B; Census, 1911, Vol V, Table XVI; Census 1921, Vol VII, Table XXI, Part A; Census 1931, Vol VII, Table XI. Sources

6.1 Occupation patern and reduction of all artisanal labour to general labour

Table 6.1 gives the occupation pattern of the village artisans: these are taken from the census tables and based on caste occupations of the artisans and covers the period between 1901 to 1931. In census person's occupation is defined by the main sources of his or hers income. A person is enumerated as agricultural labour if he earns his income primarily by working in others field. According to us, however, 'labour' is a relation. Labour has nothing but his labour-power to sell to the capitalist to earn his or hers living. This labour can be found only in a capitalist system of production. In a transitional agricultural society the 'labour' can be found in various stages of defferentiation, possessing various instruments of agricultural production from land to artisanal tools. The artisans here (Table 6.1) are not "labour" in this sense. The classical concept of labour is not applicable in this situation (Patnaik, 1976). Despite such conceptual problems, certain trends are clearly discernable in Table 6.1. The table does not give any information on female labour because of the unreliability of female data in the census. The item 'cultivation' in Table 6.1 includes cultivation of all sizes, big and small, and also tenants of all sorts, including under-tenants. The functional castes in Bihar has a tendency to report their caste occupation as their main occupation.4 And where they report agriculture as their main occupation they usually note their traditional occupation as their subsidiary occupation. Even then these data probably underestimates the number of those who are solely dependent on agriculture.

Despite these limitations certain broad conclusions can be derived from the Table 6.1. First, cultivation has emerged as one of the principal occupations of all castes in the early decades of the twentieth century in North Bihar. The only exception was the $\underline{\text{Dom}}$ (7.7 per cent) in 1911 with sharp corresponding rise in their caste occupation from 41 percent in 1901 to 79 per cent in 1911. It is probable that some proportion of this rise is due to census enumeration procedure rather than any change in real occupation pattern.

Second, one important occupations of these artisan castes is unspecified 'labour' which in our case includes all labour, including casual workers in urban areas.

^{4.} See discussions in <u>Census</u>, 1911, vol.V, p.485; <u>Census</u>, 1921, vol.VII; p.235; and <u>Census</u>, 1931, vol. VII, p.121.

Table 6.3

Artisans of three villages of Tajpur Sub-Division Darbhanga District C. 1890

Caste No. of families	Family M engage		Land (acre) per family	Rer (Rs		Livestock (No.)
	Caste pro- ssion (No.)	Labour (No.)		Per Family	Per Acre	
		Vill	lage A			
Dhoba	2		1.5	8.2	5.5	2.5
Nunia	3	5	1.7	4.1	2.4	0.3
Tanti	. -	9	1.5	6.8	4.6	0.8
Kandu		-	0.6	2.0	3.3	
Hajjan	2	2	0.9	4.3	4.9	-
Barhi	1		3.85	16.1	4.2	1
Chamar			0.9	4.3	4.9	
		Vill	age B			
Barhi	2		3.7	2.5	16.1	4.5
Hajjam	1	-	2.9	2.0	9.0	3.1
Nunia	2		0.9		9.0	11.5
Tanti	1	6	1.4	1.3	6.9	5.1
Chamar	2	7	. 1.1	0.3	4.0	3.7
		Vil	lage C			
Tanti	2	7	4.7	1.5	15.8	3.3
Chamar	1	5	0.6	0.3	1.8	3.0

Notes

- : 1) No Mohammedan caste has been taken as no break-up of them has been given in the report.
 - 2) Hardly any landless artisans exists in the village. The land is mostly cultivated as land <u>Bhaoli</u>.
 - 3) 'Land' includes 'Pahi' and 'bhaoli'. 'Pahi' land refers to land outside the village.

Source: Harrison, (1890).

In 1901 for such service castes as <u>Dhoba</u> (56 per cent), <u>Hajjam</u> (49 per cent), <u>Kumhar</u> (41 per cent) "labour" is the most important occupation. These castes are followed by <u>Dom</u>, <u>Chamar</u>, <u>Tanti</u>, and <u>Nunia</u>, and <u>Kahar</u>. In 1911, 1921 and 1931, <u>Chamar</u>, <u>Jolaha</u>, <u>Tanti</u>, and <u>Nunia</u> became more important labouring classes (Table 6.1).

Third, the caste profession continued to be reported as main occupation for a fair proportion of these castes. For <u>Dhoba</u>, <u>Barhi</u>, <u>Hajjam</u> (except in 1911) the caste proffession constitutes 30 per cent or more throughout the four decades. In case of <u>Dom</u>, <u>Jolaha</u>, <u>Tanti</u>, <u>Lohar</u> and, particularly, <u>Nunia</u> and <u>Chamar</u> the caste occupation was reported to be 29 per cent or less from 1901 to 1931

Thus: (1) the artisans have taken to cultivation and labour in large number between 1901 to 1931; (2) the caste like <u>Dhoba</u>, <u>Hajjan</u>, <u>Barhi</u>, <u>Sonar</u> and <u>Teli</u>, mostly service castes, continued their castes occupation in fair proportion possibly along with occupations related to the agriculture; (3) <u>Chamar</u>, <u>Dom</u>, <u>Nunia</u>, <u>Jolaha</u>, <u>Tanti</u>, <u>Lohar</u> have mostly abondoned their caste profession in favour of cultivation and labour.

6.2 Conditions of Artisans

In order to enqire into the conditions of these artisans in North Bihar, we have presented here some case studies. These case studies have mostly been taken from official and individual reports enquiring into the conditions of these artisans in the wake of a famine or natural calamities. Often the expressed or implied purpose of these studies had been to prove that the conditions of these artisans had not been as bad as they thought out to be. In spite of these biases, they provided useful information about these artisanal classes for our interpretations which general studies could not.

In the 1890s, Harrison made one such enquiry in the three villages of Darbhanga district (Harrison, 1890: 274-305). The village had 190 families, about 29 percent of which were artisan castes. Their economic condition is given in Table 6.2. From this

Table 6.2Economic Condition of Artisans of Three Tajpur Villages C. 1890

					(Fig	gures indicat	es nos. of	Families
	Dhoba	Nunia	Tanti	Kandu	Hajjam	Carpentar	Chamar	Lohar
Poor(in debt) In difficulty in bad	1	2	.12	1	2	3	3	3
years	2	- 6	-	1	1	3	• 1	
Comfortable	_	4	1	<u> </u>	4		-	1
Total	3	12	13	2	3	6	4	4

Source: Harrison (1890)

data we find that except one <u>Tanti</u> family and two <u>Nunia</u> families, all other artisan families were either poor and indebted or in difficulties in bad years. These <u>Tanti</u> and <u>Nunia</u> families were comfortable because they were respectively substantial tenents and owners of domestic refineries (Harrison, 1890 : 304 and 293).

Table 6.3 gives data on land holdings etc and the occupation pattern of these artisan families. Their asset structure shows the following pattern: (1) No artisan family is landless. But their average family holding is between 1.5 and half acre and they are holding land mostly under <u>bhaoli</u> i.e. crop sharing system of tenancy. Only the carpentars in village A, the <u>Barhis</u> and <u>Hajjams</u> in village B and on 2 <u>Tantis</u> in village C have more than the average size of land (2) The average number of livestock of the artisan families in village A is low, except in case of the <u>Dhobas</u> (2.5 numbers per family). In other villages their livestock endownment is good (Table 6.3).

Their occupation pattern in Table 6.3 is as follows: (1) <u>Nunia</u> (Village A), <u>Hajjam</u> (Village A) <u>Chamar</u> and <u>Tanti</u> (Village B and C) combine agricultural labour with petty tenant cultivation (bholi) and caste profession. (2) <u>Dhoba</u>(Village A), <u>Barhi</u> (Carpentar) and <u>Chamar</u> (Village A), <u>Nunia</u> (Village B) <u>Barhi</u>, <u>Hajjam</u> and <u>Nunia</u> (all Village B) does only their caste job. (3) one <u>Kandu</u> family in Village A does cultivation only.

Generally speaking, these artisans in these three villages combind all these professions in one form on the other: (a) tenant cultivation (usually inferior or waste land); (b) agricultural labour; and also (c) thir traditional craft product (Harrison, 1890). The demand for their services and their cheap, homemade product was ensured by daily necessities of the poor villagers and their social functions.

In another study of the village Paharpur, District Bhagalpur in 1888, it was found that the artisan families constitute 24 percent of total families and 21 percent of the total population in the village 5. Table 6.4 gives the land holding, occupation pattern, assets and indebtedness of these artisans. It shows, first, that almost all artisans have land, except for those belonging to khatwe (weaver), gareri (shepherd) and mallah caste. Secondly, all artisan castes still performed their caste work togather with cultivation and general work. Barhis, chamars and telis families were engaged mostly in cultivation.

^{5.} Letter dated 24 April,1888, From B.B. Narayan, assistant settlement officer, Raj Banaili and Srinagar Estate to the Collector of Bhagalpur, in P. Nolan's, Enquiry into the condition of the poorer classes, Revenue Department 30 June, 1888.

Table 6.4

Land and Other Assets of the Artisan District Bhagalpur: 1888 (Average Per Family) Labourers of Village Paharpur Pargana Kubkhand

	C	Land Holding	ng	Utensi	Utensils, Brass etc	ss etc		A	Animals		Agricu	Agricultural Implements	mpleme	ថ្ងៃ	Debt		Remarks
Caste	Number Withen		Outside	Tahli lota	lota	Bati	Cow	Bullock	Cow Bullock Buffelows Goat Plough Spade Khurpi Hansua Money Grain	Goat	Plough	Spade	Khurpi	Hansua	Money	Grain	Work Other than
	(No)	Vшаде (Bigha)	Vшаде (Bigha)	(No)	(No)	(No)	(No) (No)	(No)	(No)	(No)	(No)	(No)	(No)	(No) (No)	(Rs.)	(Mds.)	(Rs.) (Mds.) Labour
1. Sheikh	σ	1.9	1	1.2	1.4	.	1.2	.				ò		i	3.2	b	1. Work in Survey Dept. 2. Barahil (Watchman)
2. Kunjra	9	1.5	1.0	.6		÷	.2	.		မ		Ġ	'n	·ω	6	.7	1. Work as Cooli outside village
3. Goala	12	1.79	.42	.6	.6	.08	ن	.25		:2		ĊΠ	.75		. 8	is	
4. Khatwa	2	.68		H	. .								ប់ា		<u>ა</u> ნ	٧	One family has taken to be paid by work
5. Halwai	-	2.5	1		22	1)		8	ı	
6. Gareri	—	.65	The state of the s	.6	.6	.08	.ώ	.25	1		1	1			10		

Sources : Letter dated 24 April, 1888, from Baboo Burhandeo Narayan, Assistant Settlement Officeer, Raj Banaili and Srinagar Estate to Collector of Bhagalpur, in P. Nolans Enquiry into Conditions of Poorer Classes, letter dated 30 June, 1888, Revenue Department, Darjeeling.

One gareri family had been reduced to performing agricultural labour alone. Third, their asset holdings were insignificant. They owned implements like plough, spade, khurpi, ansua etc. None of them owned any ploughs. No information was there in the report about their artisanal implements. Fourth, Indebtedness was fairly widespread among the artisans.

In Table 6.5 we tabulated the sources of income and wages of these artisans. For the castes like <u>Barhi</u> and <u>Hajjam</u>, the village of <u>Paharpur</u> and the neighbouring villages of <u>Asai</u> and <u>Chhatwan</u> provided adequate demand for their services. For the telis, or oilmen, the caste profession was shrinking. They had taken to other profession like shopkeepers, grain dealers and petty money lending. One <u>Chamar</u> family lived through a) selling hides and shoes and (c) singing in social function (Table 6.5). <u>Chamarin</u> added to the family income as village midwife. Worst were the weavers, the <u>Khatwes</u> and their brethren, the <u>Gareres</u>, the blanket wearers. On their own the weavers of <u>Paharpur</u> did not weave any more. Says the Assistant Settlement Officers note. "They were given thread to weave it into cloth, for which they were given remuneration at a contractual rate. The remuneration for cloth of a particular kind and breadth was one pice per yard. One man could weave from three to seven yards of such cloth in a day. They got the work during the four months of the cold weather". Obviously <u>Khatwes</u> of Paharpur mixed cultivation and agriculteral labour with their caste job. Inspite of this their survival was precarious. The family of <u>Bhorosi Khatwe</u> is a typical example:

"The family lives partly on roots. They eat leaves of plants and drink water in <u>lotas</u> borrowed from relatives living in the same house."

In <u>Paharpur</u>, therefore, except <u>Mallah</u>, <u>Khatwe</u> and <u>Gareri</u>, all the artisan castes, combined their caste occupation with other work like cultivation, labour etc. The demand for product artisonal product come from (a) the agricultural production within the village or its neighbourhood; (b) needs of basic services and necessities of life in the society, like shaving or midwifing, (c) social functions. The weaving castes were badly affected. They had mostly become agricultural labour. Some tried to combine labour with cultivation of tenanted land. They also weave <u>motiva</u> in their dilapidated looms for the village poor.

Letter dated, 24 April 1888, from B. Narayan, Assistant Settlement Officer, Raj Banaili and Srinagar Estate to the Collector of Bhagalpur in P. Nolan, <u>Enquiry into the conditions of the poorer classes</u>, 1888.

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Letter dated, 24 April 1888, from B. Narayan, Assistant Settlement Officer, Raj Banaili and Srinagar Estate to the Collector of Bhagalpur in P. Nolan, <u>Enquiry into the conditions of the poorer classes</u>, 1888.

Table 6.5

Rates and Sources of Income of Artisans of Paharpur

	Artisans	Source of Income and Rates
1.	Barhi	"Pal" (allowance) : 1 1/4 maunds grain per plough
2.	Chamar	1. Skin of carcasses
		2. Shoe selling : 6 annas a pair (Makes 1 pair in 3 days)
		3. Musician : 1.6 annas per day.
		4. Wife: Midwifing: 4 annas male child; 2 annas female.
3.	Hajjam	1. Pal : 10 Kachoha ser per family
4.	Khatwe	1 Pice per yard woven (one man can woven 3 to 7 yards per day).
5.	Gareri	2 annas per day.
		(One blanket of 3 kachcha sers in 3 days. Cost of work: 12 annas; blanket sold: Rs.1-2)

Note: 1 pice = 1/12 th of an ans.

Source: Report of Baboo B. Narayan. Assistant Settlement Officer, Raj Banaili and

Srinagar Estate, To Collector of Bhagalpur; letter dated 24th April, 1888, in P.

Nalan, Enquiry into the condition of the poorers classes: 1888.

In the villages of Raghunathpur and Sitapur in Pargana Duphar in Bhagalpur 7 district it was found that 17 and 14 percent respectively of the populations were artisans. In Raghunathpur the artisans had no land; they were normally tenants. In Sitapur, they worked also as agricultural labourers. In Raghunathpur the weavers, weaving in the agricultural off-season, did not weave their loom on their own accounts. They weaved the cotton supplied to them by others and got usual market daily wage in return. Gareris (shepherds) made coarse blankets and sold them. These artisans were often tenants and agricultural labourers. They did their caste job to serve the village needs. The weavers and shephards in this area had the relative advantage of a local markets. They numbered six or seven families out of a total population of two thousand. But, as noted above, the weavers weaved under some kind of 'putting out system'.

In the eighteen Bhagalpur villages studied in the year 1888, it was found that the artisans castes constituted 14 percent of the prosperous villages, 6 percent of

^{7.} Letter dated 13 April, 1888; in P. Nolan's Enquiry into the condition of the poorer classes, 30 June, 1888.

Letter dated 13 April, 1888, p.2.
 Letter dated 13 April, 1888; p.2.

average villages and 15 percent of deficiant villages. ¹⁰ The artisans usually live in the bigger villages and serve the neighbouring areas.

The Report said the artisans were paid in grains. Ordinary carpenter, for example, got 3 to 4 annas a day and 2 cooked meals; potter got half of it. The weavers got only one meal. Some of these artisans, expecially weavers, worked as agricultural labourers. The weavers suffered badly due to decline of tusser industry. The number of their looms dropped to almost half and about half of the weavers in these villages joined the ranks of agricultural labour.

At about the same time, the collector of Purnea ¹¹ reported that the class of urban artisans in Purnea was very small. Coming to village artisans the collector reported that a <u>barhi</u> (carpenter) usually received an allowance of 15 to 20 sers per plough at each harvest (usually two in this region); he also earned some income by selling ploughs, boats, etc. A <u>napit</u> (barbar) received 10 sers of grains at each harvest, besides presents on social occasions and other customary allowances. A <u>dhoba</u> (washerman) got 5 to 10 sers from each household, according its size, at each harvest. A <u>chamar</u> got skin of the carecases and sold them after cobbling. <u>Chamarin</u>, his wife, added to the family income by way of presents from mid-wifing. The artisans of <u>Kajah Musahari</u> village in Purnea District, the report said, had abondoned their caste profession. Mostly Lohar (carpenter) and Muchis (cobler), they become (a) agricultural labour; (b) ploughman and/or attached labourer; (c) petty tenants or (d) petty officials like <u>Duffadar</u> in government departments.

The Collector of Monghyr, ¹² after studying ten villages in five thanas of Monghyr in 1888, observed that the artisans in all these villages operated ploughs and were paid in kind. Their women worked in the field only during the crop cutting season and earn Rs.2 to Rs.3 worth of grain. There were few weavers in these villages who appeared to be very poor. Their earning through their caste profession being very uncertain, they laboured in the field. In Mohanpur village in the district of Monghyr, the artisan were

11. Letter dated 21 April, 1888, from H.G. Cooke, Collector of Purnea to the Commissioner of the Bhagalpur Division, in P. Nolan, Enquiry Into the condition of the poorer classes (1888).

^{10.} Letter dated 7th April, 1888, from A.A. Wace, Collector of Bhagalpur to the Commissioner of Bhagalpur division, in P. Nolan, <u>Enquiry into the condition of the poorer classes</u>, 30 June, 1888, Revenue Department, Bihar State Studies, Patna. The Report covers Banka, Mushapura and Sropole subdivisions. It devided the villages into prosperous, average and deficient in terms of their proneness or otherwise to natural calamities.

^{12.} Letter dated 3 May, 1888, in P. Nolan's Enquiry into the condition of the poorer classes (1888); Revenue department, 30 June, 1888.

paid in kind. When hard pressed their women also worked they usually ate <u>makai</u> and, only occasionally rice. They were usually indebted which was usually contacted for paying rent, and only occasionally, for meeting marriage expenses.

Grierson discussed in detail the Gaya artisans who were still practising their trade. Their demand, Grierson says, is determined by the local markets (Garrison, 1893: 114). In Gaya districts particularly, the artisans were usually paid in grain. They got occasional cash, usually when they sold their wares to the village market. Their allowance were fixed by customs and tradition. In some cases it differed between Jaiman and others, particularly non-cultivators.

The dyers were feeling the European competition. The European dyes, says Grierson, could be bought in 1 pice and people could dye their own cloth at home (Garrison, 1893: 118 and 119). Only a fraction of these weavers. Jolahas, usually the poorest, operated the loom. The number of looms now was determined by market demand, not by the number of working hand in the family as earlier. They produced 'motia', a local, cheap, coarse cloth used by the poor. Usually the threads were given to weavers who weave. Rates were usually low, around 4 pies per yard. Only occasionally they got the higher rate of 1.5 sers of grain for every sers of texture woven. Their normal income was 2 annas 6 pies per day (Grierson, 1890: 114 to 122; 1926).

Table 6.6 gives the total income of artisans in two villages and their relative importance in percentage term. Table 8 shows the following: (1) Total income is Rs.6920 which per family works out to be Rs.72.1 and Rs.14 per head. (2) The percentage of supplementary work is substantial (44 percent of total income). The important sources of supplementary income are a) wages of labour (28 percent); b) services like palki bearer (27 percent); d) cultivation (11 percent). etc.

On the Gaya artisans, Grierson gave us the following information: a) Quite a few artisan castes left their jobs and joined labouring classes. Jolahas, and Rangrez were specially so. b) Artisans such as <u>lohar</u>, <u>barhi</u>, <u>chamar</u>, <u>hajjam</u>, were continuing their caste profession. But they had to supplement their income from a) labour, b) trade, c) services and d) cultivation etc. c) As for their caste profession their deamnd came from a) agriculural operation; b) domestic necessities and c) social functions. The extent of their demand, and also, therefore, the number of artisan

castes in a particular profession, was determined by the size of the particular villages they resided and its neighbourhood, the size of the local market. d) The suriving <u>Jolahas</u> still engaged in their traditional craft carried on their jobs in the form of some kind of 'putting out' system in :the consumers gave him thread out of which <u>Jolahas</u> weaved the texture at market wage rate.

Table 6.6

Artisans and their Income

	Total (%)
Income from skilled trades	3862	
Net profit of cultivation	339	11
Wages of Labour	852	28
Service	828	27
Cattle	60	2
Trade	834	27
Begging	55	2
Miscellaneous	90	3
Total supplementary Income (aunad)	3058	100
Total Income (aunad)	6920	
Per Family (aunad)	72.1	
Per Head (aunad)	14.0	

Source: G.A. Grierson, (1893:121)

The above observations were based on specific case studies mostly made in the 1880s. But their findings had larger validity in the social realities of Bihar during the entire nineteenth and early twentieth century. Writing around 1800s. Colebrooke said the artisan occupation was determined by the demand for his product in the local market. With this market shrinking, he said, the artisans had to supplement their traditional income by income from other source like agricultural labour (Colebrooke, 1884:31). Writing after him. Buchanan said, in Purnea, Bhagalpur and Shahabad, the artificers, the Pauniyas, worked partly in their farm and partly in their artisonal craft for their upkeep. But the more common feature was one brother working in the field and another following his family profession (1838, IV; 283; 1838, II: 218; 1838; II: Appendix, 5 and 45; 1838, I: 300). 13

^{13.} We have used the volumes reprinted by Comos publishers of Delhi.

One official reports from Sasaram sub-division of Gaya district made almost the same observation about the artisans there: The artisan, the report said, combined their traditional work with cultivation.¹⁴ The offical quotes three examples to substantiate his observation ¹⁵ Table 6.7).

Table 6.7Artisans of Village <u>Beerkcup</u>, Pargana Sasaram

Sl. No.	Family No.	Caste	Occupation	Income
1.	1.	Hajjam (Barbar)	Land: 7 bighas or 4.3 areas are (Joint Property)	24.5 maunds (1/2 share)
			2. Professional fees	a) 1.5 bundles from each jaiman or,
				b) 5 sers grain from non cultivators
			3. Presents	
2.	1.	Chamar	1. Land: 4 bighas or 2.5 acre	a) 14 maunds (1/2 share)
		(Tanner)		b) 1 1/2 bundles plough from <u>Jajman</u>
			2. Sale of leather product	N.A.
			3. Singing in social function.	Varying
3.	1.	Dhoba	1. Land: 5 bighas or 3.1 acre	14 mounds (1/2 share)
			2. Working cloth	a) 1 1/2 ser from jajman
				b) 5 ser per family from others.

The conditions of other caste families are no better. <u>Sonars</u>, with greater market demand for their products, were somewhat better off. But the <u>Jolahas</u> of the region, knows as Noarhofs, were in a pitiable condition. <u>Kolinhof</u>, weavers making <u>dhuree</u>, earned Rs.7.2 anas per month. The metal workers, locally called <u>Tuteres</u> and <u>Keseres</u>, had mostly become agricultural labourers.

In 1890, Skrine ¹⁶ surveyed virtually the whole of North Bihar and concluded that the artisan wages were paid in grain generally. In places were they were paid in cash, they had not risen. The customs and tradition prevented rapid wage rise. The artisans often took up land for cultivation in onerous terms. The indigo, silk, specially tusser,

^{14.} Selections from Divisional and District Annual Administrative Report, 1872-73; p.422.

^{15.} Selection from Divisional and District Annual Administrative Report :1872-73 ;pp.413-414.

^{16.} F. H, Skrine, Memorandom on the Material Condition of the Lower Classes of Bengal,

and the handloom were distressed due to foreign competition.¹⁷ In Bhagalpur tusser industry, number of looms had dropped by 50 percent and the weavers had turned mason. Only in Patna division their condition was somewhat better off possibly due to better local demand. Skrine gives the following information about their income from traditional sources ¹⁸ (Table 6.8).

Table 6.8

Income of the Artisans of Bihar

Sl. No.	District	Artisan Caste	Source of Income	Income
1.	Purnea	1. <u>Lohar/Barhi</u>	Traditional work	15 to 20 sers grain at harvest time
		2. <u>Hajjam/Dhoba</u>	Traditional work	10 sers grain per family
		3. Chamar	Traditional work	
2.	Bhagalpur	Artisan generally	Traditional work	 3 anas per day Gifts
				Total Rs. 6 per month
3.	Monghyr	Artisan generally	Traditional work ; Also land	do

The <u>Moral and Material Progress</u>, reporting at about the same period (1891-92), argued almost in the same vein. The report said that the artisans were attached to the village; they were paid in grain, and their income came from traditional craft, tenanted land, and sundry other jobs including farm labour. The potters suffered from increasing use of metal utensils; <u>telis</u> (oilman) from the use of kerosene; and the weavers from imported English calicoes. ¹⁹

In brief, one can summarise the conditions of artisians of North Bihar thus: First, the rural artisanal industries were in crisis, particularly such industries as indigo, saltpetre, textile. This crisis was due to the penetration of market changes in taste, such as increasing use of metal utensils, kerosene etc. Second, despite this, some of the rural artisans, survived. They drewn their sustenance from localised demand like (a) the necessity for creation of productive forces (e.g. agricultral tools etc.); (b) the basic necessities like utensils, coarse cloth and (c) social functions and customs (e.g. chamar

^{17.} F. H. Skrine, Memorandom on the Material Condition of the Lower Provinces of Bengal.

^{18.} F. H. Skrine, Memorandom on the Material Condition of the Lower Provinces of Bengal.

^{19.} Moral and Material Progress and Condition of India, 1891-92 (1894).

singing at the marriage etc.). Third, the artisanal castes earned their living through multiple occupations such as (a) their traditional craft; (b) cultivation (usually as insecured tenants) and (c) labour, especially agricultural labour. Some artisans like, weavers, nunias and doms became virtually agricultural labourers.

6.3 Relation between artisans and their employer

During the early British period the discussion on this was initiated by British officials like Metcafe, Maine, Elphinstone, John Shore, Philip Francis et al. While discussing the Indian villages, Marx discussed the Indian village community in connection with his discussion of the Asiatic society (Marx 1969; Bhadra 1983). Marx's observation about the Indian village society grew out of his discussion of the Asiatic Mode of Production. The latter concept was devloped by him primarily to point out the origin and the distinguishing feature of the capitalist mode of production, and not to idealise the old concept of the Indian village like the British administrators and their followers.

In later days the view of the British officials were revived in one form or another by the sociologists and other social scientists in this country. In the main, they talked about the harmonious and egalitarian nature of the Indian rural society. Only Ghurye (Ghurye, 1950) and few others talked about underlying tensions and conflicts in the Indian rural society. Bhattacharya criticised most of these sociologist and anthropologists as a historical (Bhattacharya: 1985).

The credit for reviving this old official concept goes to Wiser (Wiser: 1936), who conceptualised this artisan - cultivation dependent relationship in the <u>Jajman-Kamin</u> in <u>"The Jajmani system"</u>. <u>Jajmans</u> and <u>Kamins</u> are inter-related while serving one another: "Each serves the other. Each in turn is master; each in turn, is servant, each has his own clienteles comprising members of different castes which is <u>jajmans</u> or 'birt'. This whole argument is premised on two implict concepts: a) equal dependence and (b) cohesivement with equality. Beidelman ²¹ sharply criticised Wiser on the ground that Wiser's own work contradicts wiser's formulations. Wiser's <u>jajmani</u> system, Beidelman

^{20.} For another view, seeDumont (1972)

^{21.} See, Beidelman T. O. "A comparative analysis of the Jojmani system", monograph, August in Incorporated Publication (No date).

said, is based on 'power' whose determinant is control of land. Further, he added, in the jaimani system the force is veiled in tradition.

Neale used two terms 'resiprocative' and 'redistributive' to analise cultivator artisan relation (Neale 1962). Bhattacharya (Bhattacharya: 1985), however, points out that Neale's argument is inconsistent in the later part of his work.

Breman (Breman: 1974) tried to point out the complexities of the <u>Jajmani</u> system in his study of <u>Halipratha</u> in South Gujrat. Breman tried to argue that the relationship between unfree labours and his patron is mitigated and complicated by patronage. Bhattacharya have, however, questioned Breman's notion of dichotomy between power and esteem, on the one hand, and income maximisation, on the other. Bhattacharya says that the changes in the relationship of <u>jajman-kamin</u> from increase in the income of the landowing community as envisaged by Breman in his study may not be universally valid (Bhattarcharya: 1985: 16).

Gough provides a more adequate perceptive in understaneding the <u>jajmani</u> system. In the nineteenth century, "the Indian economic relationship becoming part of the world market system, became disembedded from political and legal institutions, just as they did in other capitialist countries (Gough, 1960:91). Under the British rule three things happened in India: (a) India was brought under the world market system as a colony (b) New political and legal institutions and private property relations were introduced. (c) But many of the old customary relations persisted. But this customary relation were brought under the "formal subsumption" of the capitalist relation. In such a situation many of the earlier, pre-capitalist relations were maintained formally, but their contents were substantilly modified.

The deeper penetration of the market in North Bihar during the British period was indisputable and we have already talked about it. The import of manufactured goods had thrown vast numbers od artisans out of their jobs. Those among them who were carrying out their caste professions were doing it as secondary pursuits.

The market impact had many other manifesations. The silk and also tusser industry, accordingly to one report, suffered due to market compitation and also taste changes induced by the market.²² The Moral and Material Progress Report pointed out

^{22.} See Memorandom on the Material condition of the Lower Provinces of Bengal, 1892; pp 746 and 54.

that the <u>Kumhar</u> (Potters) of North Bihar suffered due to increasing use of metal utensils though they gained somewhat from the greater use of bricks and tiles in house building. <u>Telis</u> suffered due to ingress of Kerosene.²³

One enquiry ²⁴ in eight villages of Sasaman sub-division suggested that one Sonar of the area earned Rs.1 a day which was more than other the earnings of wrtisans because he was the only one <u>Sonar</u> around, which kept up the demand for his product. Their condition, the report said, were no better in other areas. In Banka-Madhepur-Supaul sub-division area of Bhagulpur district <u>Sonar</u> got less than their father as the cultivators had less cash than their fathers. Weavers in the northern part of the Purnea survived as they had there the markets of their products like gunny bags, coarse clothes. ²⁵ <u>Sonar</u> of Gaya district survived because they supply a bigger market. One could find there one <u>Sonar</u> in a dozen village (Grierson: 1893). <u>Barhi, Lohar, Chamar</u> faced similar situation. They survived because they had their markets within the village.

But even for <u>Lohar</u>, <u>Chamar</u> and <u>Barhi</u> things changed. Their relationship with their cultivators had been inveighed by the market. In Bhagalpur it was reported that there had been effort to reduce the dole to the village carpenters and blacksmiths as the Railways made grain more valuable for the jajmani-cultivators who wanted to sell them to the market.²⁶

Alongside this, however, the exactions, like <u>abwab</u> and forced labour by the zamindar and the big cultivators continued. The State also often forced artisans of the road side villages to work in public works free. Often the weavers of roadside villages were dragged forcibly to work as porters, which often led to mass desertion of artisans.²⁷

In Sasman sub-division the Zamindars extracted <u>chiragi</u> (oil) from <u>Teli</u>, blankets from <u>Dom</u> and shoes from <u>Chamar</u> without payment. <u>Napit</u> was force to attend his landlords unremunerated. <u>Lohar</u> supplied iron work to zamindars unpaid. If he resided

^{23.} Moral and Material Progress and Condition of India.

^{24.} Selections from Divisional and District Annual Administrative Report, 1872-73.

^{25.} Letter dated 7th April, 1888, from A.A. Wace, Collector of Bhagalpore to the Commissioner of the Bhagalpore division; p.2. in P. Nolani Enquiry into the conditions of the poorer classes.

^{26.} Letter dated 7th April, 1888, from A.A. Wace, Collector of Bhagalpur to the Commissioner of Bhagalpore Division. p.3 in P. Nolan's, Enquiry into the conditions of the poorer classes. Also see <u>Memorandom on the Material condition of the Lower Provinces of Bengal</u> (1892)

^{27.} Journal of Bihar Research Society, vol.XXXII, March, 1946, Part I.

on his estate, the village porter supplied pottery at <u>Holi</u> and <u>Dusserah</u> free. If he is non resident, the village <u>amlahs</u> had to be kept content by such free supplies of their products.²⁸ The <u>dhuree</u> weavers paid <u>Mohtarfa</u> to the landlord (Hunter, 1976, XII: 123-124)

In Monghyr district also we found a long list of <u>abwab</u> that the zamindar extracted from their artisans. <u>Basuri</u>, an annual tax, was collected from all artisan caste in Monghyr district. <u>Dhanuk</u> and <u>Kahars</u> provided services to zamindars without payment. <u>Telis</u> and <u>Kahar</u> in all places in the Monghyr district, generally, and, in Jamni subdivision particularly, paid <u>Dolia</u>, <u>Dhunias</u>, <u>Tantis</u>, <u>Tatwas</u>, and <u>Jogis</u> paid <u>Phur</u>. In Begusani sub-division particularly, they paid <u>Tunka</u> instead of <u>Phur</u>. <u>Sonar</u> paid <u>Sonari</u> which was deductions from the purchases of crops which were usally weighed by the same at the rate of quarter of sers of grain in every rupees of grain or other articles weighted by the sonars.

Rahul Sankrityayan described this system of forced appropriation from the artisans in village <u>Ambari</u> in thana Raghunathpur in district Saran thus (Singh, 1939).

"Zamindrs takes free two maunds of oil seeds and five sers of oil per oil presser to lit chirag Twelve households of <u>Kandu</u> work on grounds free every day in rotation. Ten household of <u>Hajjam</u> run free errand. When zamindar falls ill they remain eager servants to massage his (zamindars) legs and pull his fan and do other work till he gets well. <u>Koiris</u> can sell to the market only the vegetables which remain after <u>malik</u> takes his share. Six households of <u>kumhar</u> will decorate zamindar's house and put that chets to the roof of his house at the time of festivals and marriage.

The crux of this forced labour was the time when the labour was demanded.

Famines brought out sharply another aspects of the changing relationships between zamindars and cultivators, on the one hand, and the artisans, on the other. Umpteen number of instances were there in the official documents on famine to show that the The jajman-cultivator refused protection to their clients during the famine. Ordinarily paying to the artisans in kinds for their jobs, the cultivators refused to take their wares and to pay them or to employ them during famine due to shortages of grains in their stock and high foodprices. In 1865 famine, Nunias were the worst suffers. With their saltpetre industry destroyed by official duty and compitition, they

^{28. &}lt;u>Selections from Divisional and District Annual Administration Report</u>, 1872-73. Also see, W.W. Hunter (1976: XII: 22-223) Statistical Account of Bengal, Concept Publishing Company, Delh.

found themselves left high and dry during the height of the famine when the cultivators refused to empley them. They invariable flocked at the official relief centre. In Shahabad district half of them died.

The Report of the Indian Famine commission in 1881 found that the <u>nunias</u>, weavers, <u>kahars</u> had been the most affected by the famine in the Muzaffarpur district. In Madhubani in Darbhanga district, the village artisans were major victims of famine along with the landless. <u>Sonars</u> and <u>Tantis</u> suffered as they had no land. ²⁹ Their <u>jajmans</u> did not protect them.

The 1898 famine it was reported that in <u>Champaran</u> the village artisans in Bettah Raj estate suffered most ³⁰ <u>Jolahas</u>, in fact, were the largest visitors to the poor house opened up by the Government for effective relief operation. The landless, jobless artisans refused work in the field by the cultivators. Their <u>jajman</u> refused them their grains either.

Artisans responded to all these through (a) desertion; (b) petty crimes (c) inefficient work and only occassionally (d) through organised opposition. Buchanan found villages of Patna district deserted. The weavers left these villages for fear of being indenturned to labour in the public works. In the entire period of our study only one instances of organised resistence from artisans were recorded in Sasaram in 1870.³¹ In one of the villages of the sub-division the resistence was put up by the <u>Jolahas</u> against employing them as poters. Others artisans supported them. One pensioned subedar of the native army, himself a Jolaha, organised and led the movement.³²

Conclusions in this chapter, therefore, are the following: First, despite the distruction of their artisanal craft under the impact of the de-industrialisation, some artisans like <u>Barhi</u>, <u>Chamar</u> etc still managed to survive at the village level because of localised demand for of their product from necessities of creating and maintaining (a) productive force; (b) basic necessities of life and (c) from social and religious functions. Second, the destruction of their traditional craft with no corresponding accummalation forced the vast artisans to join the classes of agricultural labour and sometimes to become petty tenants. Usually the pattern was that they carry on their

^{29.} Report of the Indian Famine Commission; Appendix (Accounts and Papers), H.C.1881, vol.71; p.53.

^{30.} Appendix to the Famine Report, 1898 being Minutes of Evidence, vol.1, Bengal, pp.44 47.

^{31.} Selections from Divisional and District Annual Administration Report: 1872-73.

^{32.} Selections from Divisional and District Annual Administration Report :1872-73;p 409

craft job, tenant cultivation and the job of agricultural labour, all together. Third the artisans' allowances, both from their traditional work and from their farm job, were usually in grains, determined by customs and tradition. Fourth, the relation between cultivators and artisans also changed. The de-industrialisation itself was associated with market penetration. Besides these, the cultivator-artisan relation was increasingly marked by cultivators' demand for higher efficiency in artisans' work along with the offer of payment to the artisans which were lesser than the normal, customs determined payment. Also, during the crisis, which could be natural or otherwise, the cultivator would offten refuse protection to the artisans, which was earlier an intregregal part of the traditional artisans-cultivators relitions. Fifth, within this overarching market relation, many old relation survived, as reflected in abwabs and forced labour. Sixth, the artisans' resistence had been passive primarily, with only one exception of organised opposition in Sasaram in 1870.

Chapter VII

SMALL PEASANTS

Small peasants are peasant farmers who cultivate their small plots of land with the help of their family members. Usually they do not hire in labour except for a few days in busy season. But they often have to supplement their own farm income by working as agricultural labourers outside their own farm and by doing sundry other job. In good years they survive; in bad years they incur debt: This sums up their material condition.

These small peasants are not Tom Kissinger's 'family farm' (Kessinger, 1979; 1974). They do not have the oppertunity of earning income from different sources that Kissinger's family farm labour possibly had in Punjab. At the peak of the agricultural season, when off-farm work is available, his on-farm work needs the most urgent attention. His economic condition does not permit him to appoint outside labour for his own farm work so that he could release himself for off-farm work and take advantage of higher wages outside (if any) and earn more. Then there might be caste and other constraints also. If he is Brahmin, he would not go out for work as agricultural labour. Bhattacharya used the 'peasant proletariat' to identify these class classes (Bhattacharya, 1985: 23-38). We would, however, settle for the more descriptive term "small peasant", i.e he who works primarily in his small (tenanted) land with his family labour and does off-season job to supplement his farm income and preserve his tiny, family plots and also his family. But he is under constant threat of extinction.

7.1 Differentiation process and Small peasant

The rural society of Bihar was subjected to important changes during the British period. In the literature of economic theory this is known as the process of "depeasantisation". At a particular 'moment' of this process the rural society takes this form (Lenin; 1964: 172-189).

(1) At the top of the society are <u>lambardar</u>, <u>mukhtar</u>, <u>jotdar</u>, <u>mondal</u>, <u>jethraiyat</u>, etc. In terms of legal relationship they are known as (a) village jamindars; (b) intermediate tenures and (c) big raiyat. In the reality of rural society of North Bihar at the time, they

For the definition of the concept of moment, see Thompson (1980: 10). Thompson defines historical 'moment' as an adequate period which enables us to observe patterns of class relationships, their ideas and institutions.

are combinations all these three forms.² At the bottom are the two principal repositary of rural labour; (a) jan, or majur, or kamaniya, or kamiyan.³ all synomynas for rural labour; and (b) kamia or debt bondage.

Foisted in between are the middle peasants. More than any other class they are the class which is most subjected to this process of depeasantisation. Two contraditory trends are discernable among them at any 'moment'. One section of these middle peasants accumulate land and other assets and go up in the ladder to join the village affluents. The other and probably the larger section, suffer economic disintegration and either join the labouring class or precariously survive as subsistence farmer, while also working inorder to keep body and soul of their family together, and also preserve their 'farm'.

We are interested in this second category among the middle peasants. They are socially known as grihasthas (Martin; 1938: 159). Grihasthas are either low caste people, or occasionally upper castes whose indigence drove them to work their own plough. The upper castes had contempt for these grihasthas. They were 'rar-jati', nich or chotlog; in south-west Shahabad they were rajil; elsewhere in Sahabad Kamina, in South-Bhagalpur 'rar bhoi'; in Tirhut solkanli, and in Gaya, raiyan. For the upper castes all these are epitaph of contempt. Proverb says (Grierson, 1975: 159).

Kaith Kichhu lelen delan, Barahman Khiyaulen. Dhan Pan puniyanten, au rar jate latiyauten (A Kayasth work on payment, a Brahman on being fed, paddy and betel on being watered, but a low caste on being kicked)

Grierson defined these small peasant as those who lived mainly on the profit of small holding (Grierson; 1893: 88). In 10 villages of Gaya district specially studied by him, he found that these class constituted almost 71 per cent of the population. In his Notes, Grievson treated these class as part of the poor cultivators and were treated as part of the size group of 5 bighas (3.1 acre) of holding.

7.2 Landholding income and assets of small peasants

Grierson emphasised the following characteristics of this category of cultivators: First their holdings were usually 5 bighas (3.1 acre) or less (2) Nowhere in the Gaya

^{2.} We have not considered absentee Zamindars. But we have included those petty Zamindars who are absentee in one village, but may be resident in another neighbouring village.

^{3.} Kamiyans are not Kamia, the bonded labour.

District they were economically self-sustained by their holdings. (3) As a result they always had to supplement their income (Grierson, 1893: 91-95).

Grierson calculated that these cultivators of Gaya district earned Rs. 42-2 (for a family of four) per year (Grierson, 1893: 93). Grierson estimated the income of the family labour of these small peasants at the market rates in estimating their income (Grierson, 1893: 93-98).

It is difficult to agree with Grierson's method of estimating family labour at the market wage rate. In the pre-capitalist labour market of nineteenth century North Bihar the family labour and the wage labour was not strictly substitutable. In the context of capitalist development in Russia, Lenin had described these family labour as under-paid labour which were distinct from free wage labour (Lenin, 1972, I). Lenin argued in the context of emerging capitalist relation in the pre-revolutionary Russia which lent validity to his argument. The social and political situation of the colonised rural society of North Bihar in the nineteenth and early twentieth century cannot be compared with the pre-revolutionary Russia. In his study of the fifteenth century Poland, Kula pointed out that the capitalist norm of cost calculations can not be applied in a precapitalist society (Kula, 1976: 76). Marc Bloch was perhaps most to the point. He identified this unpaid family labour with 'natural economy' in a precapitalist society and said that the pre-condition for the existence of this 'natural economy' as the non existence of a labour market where the labourer has the right to choose his job at the market rate (Bloch; 1967; Banaji, 1976: 313-314).

Despite the market penetration, the rural labour market of Bihar during the period was limited by such factors as the caste system, the Kamia system etc. All these restricted the possibilities for these family labour to enter the labour market as and when they were in need for jobs and take up the job according to his own volition. This limitation was further strengthened by the fact that the time when off-form job was available was also the time when the on-farm work was needed most (Bharadwaj, 1974).

Following this argument, if the family labour is not calculated, the exercise done by us shows that the income of these cultivators are reduced to amount which is much less than that of Grierson,Once this adjustment is done it becomes all the more evident that these small plots provided almost nothing for these cultivators

after the payment of rent. The cultivators were all the more forced to supplement their income 4.

The area studied by Grierson was also studies by Stevenson-Moore in order to find out whether Grierson's assertions about the poverty of Gaya peasants were correct or not 5. Stevenson - Moore found that the small peasants of Gaya were poor though not as poor as Grierson found out to be. Stevenson - Moore calculated the family labour of these small peasant at the market as done by Grierson. It you adjust the income of the family labour of Stevenson - Moore's small peasants in the manner we have done in case of Grierson, then we find that in his case also the income of the small peasants are less than that calculated by Stevenson - Moore. It showed that the percapita income of the cultivating labours had fallen: In tract I it has fallen from Rs.15.6 to Rs.5.6; in tract III from Rs.16.1 to Rs.8.1; in tract II from Rs.15.8 to Rs.5.9; and in tract IV from Rs.14.8 to Rs.3.5. They had Just minimum cash. The need for supplementary income was great. These supplementary sources of income included labour as well as other sources of income.

In their tenanted land these small peasants primarily produced foodcrop for thier subsistence. Only a small portion of this land was given to cash crop which were marketed to earn cash for meeting urgent cash commitment (Grierson, 1893: 98-102). Their tenanted landholding was inadequate to earn even their bare subsistance. They hired out their labour in a substantial manner.

In the village Paharpur ⁶ in Banaili estate in Bhagalpur district out of 93 families, 30 persons, i.e. 32 percent, came within the category of small peasants. Castewise the largest caste was Goala (12), followed by <u>Kunjra</u> ⁷ (9) , <u>Sheikh</u> ⁸(5), <u>Khatwe</u> ⁹ (2) <u>Halwai</u> and Gareri 1 each. No official estimation of their income was available. But the district officials made the remark that these classes did not starve though they were badly housed and badly clothed.

^{4.} Grierson said: "if we exclude other sources of income, 70 per cent of the holdings of the district do not support their holdings"; see Grierson (1893: 95)

^{5.} Report on the Material Condition of Small Cultivators and Labourers in Gaya.

^{6.} Information has been culled out from the report of the manager of the Banaili Estate; See letter no 51, dated 24 April, 1898, in P. Nolan, Enquiry into the condition of the poorer calsses, June, 1888, .

^{7.} Kunjra - vegetable sellers. see Risely (1981:527)

^{8.} Shaik - N.A.

^{9.} Khatwe - Palanquin bearing and cultivating castes of Bihar; see Risely (1981: 484).

The major sources of income of these cultivators were: (a) cultivation; (b) income from agricultural labour and (c) income from other odd sources including low paid jobs in the government offices. These jobs were done either in the off-season by the head male member of the family or by another member of the same family. A few details of supplementary work, for example, ¹⁰ were like this: (1) The <u>kunjra</u> castes produced and sold vegetable which was their caste profession, besides cultivation of their own holding and working on off-farm agricultural labour work. (2) <u>Mittoo Sheikh's</u> brother worked as Chainman in the survey department for Rs.4 per month. (3) <u>Dullab Sheikhs</u> relation worked as <u>barahil</u> (village-watchman) for Rs.1 per month.

Other information of the village report showed the following: First, The average per family land holding was 1.58 bigha (1 acre); Sheiks had 1.9 bigha or 1.2 acre, Goalas 1.79 bigha or 1.1 acre; Kunjra 1.5 bigha or .9: Khatwe and Gareris have less than 1 bigha per family. Second Goalas and Kunjras took land on rent in other villages for cultivation. For Kunjras the average holdings outside the village was 1 bigha (.6 acre). For Goalas the corresponding figures were .4 bigha (.25 acre) and 20 per cent. Third, at least one person among the cultivators had let out land: Rootai Kunjra sublet a portion of his holdings in Batai (half share) because he himself could not afford to cultivate (though he himself had about 4 bigha, or 2.5 acre, on rent in the Paharpur village as also the in neighbouring village of Rampur). Fourth, their possession of various types of utensils were meagre. Fifth, their possession of animal stock was also very poor. Sheikhs' possession averaged (per family) more than 1. For the rest the average per family figure was less than even .5. Sixth, none of these cultivating laboures had plough. Their possession of spade was also less than 1 average per family. All most all of them had Khurpi and Hansua, the two essential instruments of labours (for both on-farm and off-farm labour).

All of them were indebted, either in money or in grain. The most indebted, the Report said, was the one <u>Gareri</u> family who had an avarage loan of Rs. 10 in monetary terms. Sheikh's average debt in money term was Rs. 3.2, and in grain 2 <u>maunds</u>. for <u>khatwe</u> it was Rs. 2.5 in money and Rs. 2 <u>maunds</u> in grain respectively; for <u>Goalas</u> it was Rs. 8 and Rs. 2 respectively; and for <u>Khatwe</u> it was Rs. 2.5 and 2 maunds respectively. The Report

10. Letter dated 24 April, 1888, in P. Nolan. Enquiry into the Conditions of Poorer Classes (1888).

^{11. &}lt;u>Kunira</u> was poor. Yet he let out possibly because of the difficulties of cultivating the land. See letter dated 24th April, 1888; p.7, in P. Nolan. <u>Enquiry into the Conditions of Poorer Classes</u> June, 1888.

had no mention of interest or how the loan and interest was repaid. But there was at least one <u>Goala</u> family who had taken loan (amount not known) which had to be repaid by labour as per contract which reveals the linkages between the credit and labour market .¹²

Three things can, therefore, be noted in Paharpur villages: First, these cultivators had inadequate land-holding and poorly endowed in agricultural implements. Second, they did off-farm agricultural work including petty government work. Third, they were indebted and at least one of them was paying loans through work.

The information given by the Collector of village khanwah, pargans Dharempur in Purnia district has been presented in Table below: 13

Table 7.1

	Area of holding area cropped (Bigha)	Output (Mds)	Other income total income (Rs.)	Consum- ption (Mds)	Rent (Per acre)	Nature of other Job
Average	1.45	14.5	26.25	- 25.5	1.2	1. Ploughman
per Family						2. Labour general
Per Capita	.41	4.1	7.5	7.2	Do	3. Journeymen

Source: Appendix A; letter dated 2nd May 1888, in P. Nolan, <u>Enquirry into the conditions</u> of the Poorer Classes.

Table 7.1 has certain specific features: (1) The castes were Musahar.(2) The Musahars cultivated their land which was usally rented, (3) The original table showed that the total income (cash) is equal to their income from other sources. They had been shown in one column in our table. From this table one can infer the following things: (1) Both average per family land holding (1.45 bigha or 1.8 acre) and per capita holding (.41 bigha or .7 acre) were inordinately low. (2) Consumption far outstrip the output from the rented family farm. Output was 14.5 maunds while the consumption was 25.5, i.e. output was a little over half of the average family consumption. Similar was the situation in per capita output and consumption. This meant that consumption had to be met by working outside. The Musahar worked primarily as ploughmen, journeyman and general labour.

^{12.} Letter dated 24 April, 1888, in P. Nolan, Enquiry into the conditions of the poorer classes; p.7.

^{13.} Letter dated 2nd May, 1888, in P. Nolan; Enquiry into the Conditions of the poorer classes, p.2. We restructured the table to meet our requirement.

Among the three Bhagalpur villages studied by Harrison in the 1880s (Harrison, 1890) in village I the small peasants fell mostly in the categories of poor (40 percent) and those who were in difficulties in bad years (38 percent). The poor peasants hired themselves out as agricultural labourers (41 percent) and in the second category eight percent of the total number of persons did so. (The cultivators categorised as 'comfortable' also hired themselves out (44 percent), but mostly in the relatively higher paid jobs like sugar refinery or salt-petre manufacturing and therefore couldnot strictly be called small peasant).

The largest proportion of the poor cultivators came from the backward castes like Koeris (14 percent) and untouchables like <u>Dosadhs</u> (19 percent) and also muslims (50 percent), mostly <u>Jolahas</u> (Table 7). Those cultivators who falls in difficulties in bad years primarily came from such caste as <u>Goalas</u> (22 percent). <u>Koeris</u> (5 percent) and also Mohammedan (34 percent) (Table 7).

Per family average landholdings of the poor was only .69 bigha (.43 acre) inside village and .07 outside the village. Their per family annual stock averaged only .09 number. The corresponding figure for those who were in difficulties in bad years were 3.8 bigha (2.4 acre) inside village, .83 bigha (.51 acre) outside and their number of animal stock per family was 1.05.

In village II, more than 80 per cent of the cultivators were either poor (56 percent) or those belong to that category of labourers who fall in difficulties in bad years (32 percent). Of the poor 61 (59 per cent) hired themselves out as agricultural labourers. In the second category this figure was 7.4 percent.

Poor cultivators in village II came from castes like <u>Koeris</u> (22 percent), <u>Dosadhs</u> (16 percent), <u>Musahars</u> (21 percent) and also Muslims (32 percent), who were mostly <u>Jolahas</u> in this village too. Those in the second category came from castes like <u>Koeris</u> (73 percent), <u>Musahars</u> (9 percent) and Mohammodans (18 percent) (Table 7.2).

In their village the holding size per family of the poor cultivators was 1.3 bigha inside village and 1.2 bigha outside the village. For the second categories these figures were 2.2 bigha in the village (1.4 acre) and 1.1 bigha outside the village (.7) respectively. In this respect the position of both these two categories of poor peasants in village II were better than that of their counterpart in Village I. Their animal stock position was, however, as bad as their brethren in village A.

In village III there was no poor peasants. It was because these cultivators in village III were upper castes cultivators, either Brahmin or Rajputs for whom farmwork was abominable. This also possibly explained larger presence of cultivators in village III who were engaged in their caste profession (Table 7.2). For the first category of farmers the percentage of cultivators engaged in caste proffession was 30 percent; for the second 6; and for the third category comprised wholly of 3 <u>Goala</u> families it was 25 percent of the total (Table 7.2). These cultivators were better endowed in terms of landholding. Their animal stock was, however, as bad as their counterpart in other two villages except for those who were in comfortable category (1.3 plough bullock per family).

Table 7.2
Social Origin of small peasants in three Darbhanga Village

				3	
Upper Caste	Goala	Koeri	Dosadh	Husahar	Mohammeden
	Vi	llage I			
5(36) (24)		3(60) (14)	3(100) (14)		10(50) (48)
7(50) (39)	4(67) (22)	1(20) (5)			6(35) (34)
2(14) (22)	2(33) (22)	1(20) (11)			4(15) (45)
14					
	Vi	llage II			
1(100) (5)		5(31) (26)	3(100) (16)	·4(68) (21)	6(75) (32)
		8(50) (73)	(9)	1(16)	2(25) (18)
		3(19) (75)		1(16) (25)	(45)
					1914 : 1, 16 1 1, 5 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	Vil	lage III _			
5(50) (100)					
5(50) (100)					
	3(100) (100)				
	5(36) (24) 7(50) (39) 2(14) (22) 14 1(100) (5) - - - 5(50) (100) 5(50) (100)	Vi 5(36) - (24) 7(50) 4(67) (39) (22) 2(14) 2(33) (22) (22) 14 Vi 1(100) - (5) Vi) 5(50) - (100) 5(50) - (100) - 3(100)	Village I 5(36) - 3(60) (24) (14) 7(50) 4(67) 1(20) (39) (22) (5) 2(14) 2(33) 1(20) (22) (22) (11) 14 Village II 1(100) - 5(31) (5) (26) 8(50) (73) 3(19) (75) Village III 5(50) Village III 5(50) (100) 5(50) (100) - 3(100) -	Village I 5(36) - 3(60) 3(100) (24) (14) (14) 7(50) 4(67) 1(20) - (39) (22) (5) 2(14) 2(33) 1(20) - (22) (22) (11) 14 Village II 1(100) - 5(31) 3(100) (5) (26) (16) - 8(50) - (73) (9) - 3(19) - (75) Village III 5(50) Village III 5(50) 3(100) 3(100)	Village I 5(36) - 3(60) 3(100) - (24) (14) (14) (14) 7(50) 4(67) 1(20) (39) (22) (5) 2(14) 2(33) 1(20) (22) (22) (11) 14 Village II 1(100) - 5(31) 3(100) 4(68) (5) (26) (16) (21) - 8(50) - 1(16) (73) (9) - 3(19) - 1(16) (75) (25) Village III 5(50) (100) 5(50) (100) 5(50)

Note: 1. We have clubbed together Brahmin, Rajput and also Bania (an intermediate caste strictly speaking) as upper caste.

2. All these classes, including 'rich', possess 5 bigha or 3 1/4 acres of land.

3. Figures in the bracket are percentage. Figures within bracket below the actual number shows the percentage distribution of castes within the class and those by the side shows the percentage distribution of a caste between class.

Source: Harrison (1890).

No information on indebteness of these poor peasants had been given by Harrison in his study. But he had added the word 'indebted' in parenthesis in the poor category of cultivators in all the three villages and the word 'lends' in the well-to-do category. This showed, at least by implications, that cultivatiors in the poor category, i.e. the small peasants, were usually indebted and the rich cultivators were lenders.

The Settlement Report of Muzaffarpur¹⁴ district found large presence of these small peasants in Muzaffarpur. In an intensive study of 22 villages in Muzaffarpur district it was found that 19 percent of the population were in the category of the small pasants (Table 7.3). A large number of them were indebted (23 percent). The per head loan was Rs.1.5 and income from supplementary sources were Rs.22,555 total and per capita Rs.6.3 (Table 7.3A). The sources of supplementary income were usually services like barahils, cook, watchman etc. and the sale of such commodities as ghi, vegetables, cow-dung etc. In some of these selected villages a number of Koeri families, numbering 20, had become poor peasants following the death of the head of the family and other calamities leading to loss of their land. In

In the district of Monghyr also Stnvenson-Moore made intensive study of some of the villages of Narhan estate, which included large number of these cultivators. Stevenson-Moore's information about these cultivators of the Narhan estate in the Monghyr district had been presented in Table 7.3B which shows the following characteristics: In the entire Narhan estate 21 per cent of the total population were those who were partly cultivators and partly labourers. Stevenson Moore's more detailed study of six villages (different from those in table 7.3B) also gives the same percentage figure for the small peasants i.e. 20 percent in the total population. For the entire estate, Dusadh (49 percent) was the largest caste to form this class of the poor peasants (Table 7.3B). Other important castes were Dhanuk (27 percent), Kanu (18 percent), and Nunia (6 percent) among the backward castes (Table 26 B). Kayasthas (1 percent) were the only upper caste who had been counted among these small peasants.

^{14.} Report On the Survey and Settlement Operations in the Muzaffarpur District 1961.

^{15.} Report on the Survey and Settlement Operations in the Muzaffarpur District (1961).

^{16.} This service does not include agricultural labourer. See on this Grierson, (1893: 106)

^{17.} Report On the Survey and Settlement Operations in the Muzaffarpur District (1961).

^{18.} Final Report on the Survey and Settlement Operations of the Norhans Estate in the Monghyr District. (1898) p.26.

More detailed study of six villages by Stevenson-Moore showed that almost 23 percent of total holding in these villages belonged to these cultivators and their average holding was 1.55 acre (Table 7.3 B). Of the castes, <u>Dosadhs</u> commanded largest chunks of land (15 percent) and their average holding size was 1.38 acre; <u>Nunias</u> have 2.7 percent of the total and their average land size was 1.4; for <u>Kayasthas</u> the corresponding figures were 2.5 percent and 3.3 acre; for <u>Kanu</u> 1.24 percent and .47 acre; for <u>Dhanuk</u> .75 percent and 1.44 acre; and for <u>Turha</u> .25 percent and 2.17 acre.

These three villages of Darbhanga, therefore, shows that (1) these cultivators had small landholding, (2) their other assets were also meagre and (3) they were forced to suppliment their income by working usually as agricultural labourer.

Table 7.3Poor Peasants of Muzaffarpur and Monghyr District 1892-99

7.3 A. Muzaffarpur District

Indebtedness

Migration

Total Population

		Number	Percentage to total Population	other Sour Total Per h (Rs.)		l Per hea	ad Total Numbe	Percent to er Total Number
Mι	Villages of zaffarpur strict	. 3557	19	22,555	6.3 5,2	4 5 1.5	5 310	8.7
			7.3 B. <u>Mor</u>	nghyr Distric	t (Narhan	Estate)		
	Castes	Male	Total Populat (Narhan Esta Female		Six Se Holdings (No)		ages of Na Average Size (acre)	rhan Estate Percentage of Holdings by each caste to total Holdings
1.	Kayastha	39(1.0)	38(1.0)	77(12)	10	32.62	3.26	2.49
2.	Kanu	557(17.0)	601(18.0)	1158(17.7)	5	2.35	.47	1.24
3.	Nunia	187(6.0)	201(6.0)	388(5.9)	11	15.46	1.4	2.74
4.	Turha ²				1	2.17	2.17	.25
5.	Dusadh	1607(49)	1550(48)	3167(48.9)	61	84.47	1.38	15.21
6.	Dhanuk	863(27)	891(27.0)	1754(26.8)	3	4.32	1.44	.75
	Total	3253(100)	3291(100)	6534(100)	91	141.39	1.55	22.68
7.	Percentag holding in	e of Total a the estate		21				

Note: 1. For Muzaffarpur: C.J. Stevenson-Moore, <u>Survey and Settlement Operation in the Muzaffarpur District</u>, 1961 p.392.

Source: 1. For Monghyr: Final Report on the Survey and Settlement Operation of the Narhan's Ward Estate in the Monghyr District, 1898, pp.22 and 25.

These features revealed in these case studies were not isolated and typical of these villages. These were, in fact, only more poignant revealation of the basic features of this class in the North Bihar rural society during the colonial period.

The collector of Bhagalpur, ¹⁹ writing about the <u>Banka</u>, <u>Madhepur</u> and <u>Soopole</u> subdivision of Bhagalpur district, said that these cultivators were mostly indebted and they mortgaged their crop even before they were harvested. The settlement officer of Raj Banaili and Srinagar Estate found that in 2 villages of the estate these cultivators had little land and no agricultural implement, including plough. They tried to make up this defeciency by exchanging labour with plough of the big cultivators.²⁰

On Patna district we have the report of the District Magistrate, who estimated from the study of two villages, that a family of 5 needed 1220 sers of food for survival in a year.²¹ This meant that, at 4 maunds,²² the family needed 7 bighas (4.4 acre) for survival, unaided by income from labour. But 40 percent of the cultivators in this two villages had 4 bighas (2.5 acre) or less size of holding, thus implying that they could not survive without labouring at others field.

For the district as a whole, the District Collector of Patna said, the total cost of supporting a ryot's family of four was Rs.33.²³ The total earning of a ryot of 4 bighas (2.5 acre) was about Rs.36, leaving a gap of Rs.3. But the average area of holding of Patna ryots were less than 4 bighas (2.5 acre) with the result that most of them were deficient farmer. They were usually badly clothed, badly housed, and lived on coarsert Khesari dal. Even that they did not got all the year sound.

The Collector of Darbhanga argued in the same vein. About 60 percent of ryots in Tajpore villages, selected for intensive enquiry, had 4 bighas (2.5 acre) or less. Possibly the holdings of 2 bighas (1.25 acre) or less were more numerous than those of 3 bighas

^{19.} It was found 14 percent of 2 properous villages, 19 percent of two average villages and two worse-off villages were small peasants and had these features. Letter dated 7 April, 1888, from A.W.Wall, Collector of Bhagalpur to Commissioner of Bhagalpur, in P. Nolan; Enquiry into the conditions of poorer classes; 1888; pp. 2 and 3.

^{20.} Letter dated 13 April, 1888; from F.W. Collins, Settlement Officer, Raj Banaili and Srinagar Estate to the 'Collector of Bhagalpur', in P. Nolan; Enquiry into the condition of poorer classes; 1888; pp.3-7.

^{21.} Letter dated 2nd June, 1888, from J. Boxwell, Offg. Commissioner of Patna Division to the Secretary to Government of Bengal, Revenue Department; in P. Nolan's Enquiry into the conditions of poorer classes; 1888.

^{22.} Total production is 8 maunds per bigha; half goes as rent.

^{23.} Letter dated 2nd June, 1888; From J. Boxwell Officiating Commissioner of Patna Division To the Secretary to the Government of Bengal, Revenue Department, in P. Nolan's Enquiry into the Conditions of Poorer Classes

(1.9 acre) to 4 bighas (2.5 acre). This was, he said, true about the entire district. These small holders, he added, were badly off and they had to supplement their income by working in others field. Sometimes they even migrated to neighbouring district during the harvest period in search of work. They got there higher wages and ate <u>Marwa</u> (Indian Corn) in the day.

From the above discussion one can, therefore, make the following conclusions about the small peasants: First their family hilding was small. They were poorly endowed in terms of agricultural implements and animal stock. Second, they cultivated their small holding mainly by family labour. They made up their poor supply of animal and plough by exchanging their labour with the plough and animals of their affluent neighbours. Third, their subsistance farm gave them bare subsistence and compelled them to make up their paltry income from agriculture by working as agricultural labour etc. Fourth, they were usally indebted. Instances were there which showed that these loans were often sought to be repaid by working as agricultural labour in debtors field or by mortgaging the crops before they were cut. This suggests linkages between of credit market and labour market and also between credit market and product market.

Chapter VIII

KAMIA OR THE BONDED LABOUR

In this chapter we deal with the <u>Kamias</u> They differ from the earlier categories of labourers in that they do not have any property particularly land.

The system of attached, unfree labourer ² is not exactly a colonial creation. It, in fact, predated the Mughal period. The Maurya state used slave labour for public works; their rich landowners employed slaves for agricultural operations (Sharma, 1980). There are evidences of sale and purchase of girl slaves in 16th, 17th and 18th centuries in the Mithila region of North Bihar: these slaves were probably used for domestic purposes and for sexual exploitation.

The Sanskrit documents unearthed in the Mithila region indicated the existence of various forms of agreements binding artisanal and general labour in various kinds of works (Thakur, 1958). Buchanan found fairly widespread use of slave labour in the Patna-Gaya-Purnea region of North Bihar. For Bihar and Purnea he gave the following distribution of slave labour:

Table 8.1Slave Labour in North Bihar

	Occupation			Slaves	
and the same		I I	Bihar	Pı	Purnea 0 Percent 90 13 00 28 50 59
		No	Percent	No	Percent
1.	Domestic Work	5,055	15	790	13
2.	Partly Domestic, Partly Agriculture	9,270	29	1,700	28
3.	Entirely Agriculture	18,495	56	3,650	59
4.	Total	38,820	100	6,140	100

Source: 1. For Bihar: Francis Buchanan, An Account of the District of Bihar and Patna in 1811-1812; p.787; (2) For Purnea: Francis Buchanan, An Account of the District of Purnea in 1809-10; p.607 and 608. Both vols. published by Bihar and Orissa Research Society, Patna, 1938.

Of these slaves (Table 8.1), 56 percent in Bihar and 59 percent in Purnea were employed in agriculture; 29 percent in Bihar and 28 percent in Purnea in both agriculture

^{1.} Buchanan distinguished the <u>kamias</u> and the landless labourers from others as "those who cultivate land in which they do not have any property"; Martin (1838).

^{2.} The term "attached, unfree" have been used here loosely to include all unfree labour.

and domestic work; and 15 percent in Bihar and 13 percent in Purnea in domestic work only. In Bhagalpur and Shahabad also, Buchanan found slave labour though he did not provide any estimate of their number (Martin, 1838, III: 98-99; I: 479).

Buchanan, however, in his diary frequently wrote about the decline of slave labour in this region during his period. Number of factors contributed to this decline. The slaves could be maintained only with enormous social and economic power which the slave-owning landlords and rich cultivators were often unable to muster (Kosambi, 1956: 354). Further, the slave owners deteriorating economic condition in Bihar made the maintenance of slaves uneconomic. Faced with this, as also the social disapproval of the sale of slave labour, the slave owning zamindars and rich cultivators quietly allowed their slaves to go free and earn their own living (Martin, 1838, I: 125). For example, the zamindar of Bedopur, in thana Barh in the Patna district, set free his eighteen slaves who, however, continued to live with their ex-master. It is quite likely that many of these former slaves became Kamias.³

Though the colonial administrators have used such words as 'pure slavery', 'chattel', 'half-enslaved labour', 'bondmen', 'serf', 'really serf', 'ascripti glebae', to describe the Kamias, the later were not slaves; they were not bought and sold. Grierson's observation about the Kamias was nearest to the reality: "Formerly this was an actual sale of himself and his heirs forever, but this having been declared to be illegal, he now hires himself, in consideration of a stated advance or loan, to serve for a hundred years, or until the money is repaid, which comes to very much the same thing" (Grierson, 1893: 110). Grierson's allusion was to the changes in the labour relation: from the direct ownership of slave labour to the control over the labourer's work through credit.

8.1 Origin of the Kamia

A number of factors contributed to the creation and continuation of the bonded labour in different regions. Grierson (1893) argued that the widespread prevalence of self-supporting cultivators meant dearth of labour to that section of the cultivators who employ labour. This led to the necessity for these cultivators in Bihar to go for forced labour. Srinivasan (1966: 42) pointed out that the pravelence of unexplored

^{3.} Final Report on the Survey and Settlement Operation in the District of Patna, 1915; p.29.

regions that enabled agricultural population to acquire land easily and refuse the work of agricultural labour might encourage the big cultivators in an area to go for the bonded labour. In a land-abundant economy, Habib 4 said, "if there is no caste restriction on the acquisition of land, it becomes difficult to get labour and encourage the bonded labour system".

Patel (1952) said that lack of employment opportunities and unforeseen fluctuations in agricultural output prompted agricultural labour to accept bondage in some areas. The bondedness also originated from the monopolisation of land in a few hands through enactment etc and also through the enserfment of the dispossessed peasantry. This was often the origin of bondedness among the tribals.⁵

Breman, (1974: 13-16) however, suggested a wider analytical framework. The relationship between land owner and farm servents in a traditional society, he said, had to be judged in the wider caste relationship known as the <u>jajmani system</u>. Breman, reformulated the concept of <u>jajmani</u> system as expounded by Wiser. For him the <u>jajmani</u> system expressed the differences in purity, material wellbeing and power, which sometimes acted togather and sometimes acted in opposition and these determined the social positions of the members of a caste in the hierarchy. In the light of this relationship, the servitude of unfree labour was complicated and mitigated by a relationship of patronage (Breman, 1974: 27).

In Breman's analysis the crucial aspect was his understanding of the word 'patronage'. In Gujarat, the <u>dhaniamo</u> took <u>hali</u> for social and ritual reasons. Social status and power rather than profit maximisation was the motivating elements for maintaining <u>hali</u> by the <u>dhaniamo</u> patrons. It was expected, as hinted by Breman, that with the growth of commercialisation of agriculture, the urge for social status and power would be yielding place to a profit maximising instinct. Things may not, however, always happen this way (Bhattacharya: 1985). In Bihar, at least, commercialisation of agriculture by itself did not lead to freedom for the labouring classes. It came where the later classes put pressure for change from below (Prasad, 1973, 1973a).

^{4.} See Habib in Enquiry 4; see also, Pandian (1990) and Breman (1974) on this.

^{5.} For social anthropological analysis of the labourers attitude, See Kumar (1965).
6. For a review of the jaimani system, See Beidelman (1959) and Gough (1960).

The rural society of North Bihar in the nineteenth and early twentieth century was not 'traditional'. The colonial state had already introduced private property in land, which, though limited, had eroded the very basis of village society based on the economics of the caste system 7. Commercialisation of agriculture and the demand for revenue by the state had enforced production for market though cultivation based on peasant farming remained the dominant form of production organisation. The law courts had declared Kamiauti bond void in a number of cases even before the passing of the Act.8 Broadly speaking the specific facture of this society is the non-correspondence between different structures of the society — the economic, social and politic, each sometimes supporting and sometimes opposing the other. The Kamias and the Kamiauti system is the product of this complexities.

8.2 The castes of the kamias

Kamias are mostly former agricultural labour. In a study of eight villages in Gaya district in 1888, it was found that almost 56 percent of the landless agricultural labour were kamias.

7. See Bagchi (1982) and also Gough (1960: 83-91).

8. Indian Law Reports, Calcutta, Vol XLII, p.742; Sharf-Uddin and Coxe March, 1965; also Patna Law Journal, Vol III; p.412.

9. Bonded ploughmen in Bihar is generally known as <u>Kamia</u>. <u>The Kamiauti Agreement Bill</u> lent credence to this usage. But in actual life these attached labourers were known variously in various parts of North Bihar with specific jobs assigned to them by customs and tradition. The following table is an example:

1.	Darbhanga	a)	Bahia	Virtually hereditory	Only maintenance wo
		b)	Bariana	servants (personal) Wholetime labour	Loan given
		c)	Jan	Bonded ploughmen	Loan given
2	Purnea	a)	Harwari	Only Ploughing	Loan given
		b)	Janauri	all types of work	
3	Chotanagpur	a)	Jan }		
		b)	Khand Bandhua }	Agricultural	
		C)	Khamianti }	Work	

d) <u>Harwabe</u>)
Sources: 1. Letter dated 12 September 1919, from J.A. Hubbak Secretary to Government to Secretary to Government of India, Department of Revenue and Agriculture, No.7596/S-25 R, Proceedings Volume 828, October 1919, Bihar State Archives, Patna.

2. Letter dated 2 June, 1888, in P. Nolan, <u>Enquiry into conditions of the poorer classes</u>, Revenue Department, 30 June 1888.

3. Letter dated 15 October, 1889, from Mr. Carstains, Officiating Deputy Commissioners of Santhal Pargana, to the Commissioner of Santhal Pargana, Bhagalpur, Commissioners Record, Basta 887-89, Bihar State Archives, Patna.

10. C.J. Stevenson-Moore, <u>Report on the Material Conditions of Small Agriculturists and Labourers in Gaya</u>, Calcutta, p.29.

The castes of these agricultural labourers were <u>kahar</u>, <u>chamar</u>, <u>dosadh</u>, <u>musahar</u> and <u>rajwar</u>. The <u>kamias</u> were drawn from these castes (Table 8.2):

Table 8.2Social Origin of <u>Kamias</u>

			and the second s
	Caste	No.	Percent
1.	Kahar	125,770	30
2.	Chamar	84,115	20
3.	Dosadh	110,192	26
4.	Musahar	58,280	14
5.	Rajwar	42,269	10
6.	Total	420,526	100

Source: C.J. Stevenson-Moore, <u>Report on the Material Condition of Small Agriculturists and Labourers in Gaya</u>, p.29.

From Table 8.2 the following can be inferred: 91) The <u>kamias</u> were mostly drawn from the ranks of agricultural labour, if their castes are taken as indication of their occupation. (2) They came from two broad categories of castes. One is the lower castes like <u>dosadh</u>, <u>musahar</u> and <u>rajwar</u>. The others are the artisanal castes like <u>chamar</u> and <u>kahar</u>.

In Shahabad, the district officer wrote, the agricultural labourers were comprised of lowest castes like <u>dosadhs</u>, <u>chamars</u>, and even some <u>banias</u>.¹¹ In another study of some selected villages of Muzafferpur district between 1892-99, Stevenson-Moore found that 25 percent of the pure labourers were attached to either landlords or cultivators.¹² The Collector of Bhagalpur reported in 1888 that the percentage of labourers working with one ryot was 50 in Banka thana, 60 in Madhepur thana, and 42 in Supol thana. The Collector described them as attached labourer.¹³

Table 8.3 further elaborates the caste linkages of the <u>kamias</u> in the districts of Bihar: (1) They were from castes like <u>Dosadhs</u>, <u>Musahar</u>, <u>Rajwar</u> etc. (2) They were also from artisanal castes like <u>Jolahas</u> (3) Or they were agricultural castes like <u>Kurmi</u>, <u>Kahar</u> etc.

^{11.} Letter dated 2nd June, 1888, in P. Nolans Enquiry into the condition of poorer classes, July 1888.

^{12.} C.J. Stevenson-Moore, <u>Survey and Settlement Operation in the District of Muzaffarpur District</u>, 1892-1899, Patna, 1961.

^{13.} Letter dated 10 April, 1888; from John Beames, Commissioner of Bhagalpur and Santhal Pargana to the Secretary to the Government of Bengal, Revenue Department; in P. Nolan, <u>Enquiry into the condition of poorer classes</u>. Jully, 1888.

Table 8.3
Castes of Kamias

	District	Castes
1.	Patna	Musahar, Dom, Kahar, Dhanuk, Kurmi and other low castes.
2.	Gaya	Chamar, Dosadh, Kahar, Musahar, Rajwar, Kurmi, Bhuinyan, Rajwar, and other low castes and aboriginals.
3.	Shahabad	Kurmis, Dosadh, Chamar, Bania, Jolaha.
4.	Munghyr	Musahar, Dosadh.
5.	Purnea	Musahar and other low castes.

Source: 1. Survey and Settlement Reports, various districts.

- 2. L.S.S. O'Malley, Bihar District Gazetteers relevant volumes.
- 3. W.W. Hunter: Statistical Accounts of Bengal.

In tribal dominated districts of Hazaribagh, the tribals were dispossessed of their land and made to work as <u>Kamia</u>. The tribals often consented to this arrangement as otherwise as tenants, they were often forced to do <u>'begar'</u>. The native, indebted <u>Kharwar</u> tenants in the hilly tracts of the Shahabad district were dispossessed of their land and were compelled to work as <u>kamia</u>. The causes of their indebtedness were usually the crop failures and high rent (C. S. E. 1879). In a village these tribals accepted the bond of <u>kamia</u> as that was the only way to get a job in villages for a stranger. 15

In Hazaribagh district, the big cultivators employed their tenants to extend cultivation by clearing jungle and then forced the later to work as their $\underline{\text{kamia}}$. It was found that the under-raiyats of the Maksudpur estate in Gaya district were mostly the $\underline{\text{kamias}}$ of the big cultivators. 17

The <u>Kamias</u> of North Bihar, therefore, had the following linkages:(1) The <u>kamias</u> were drawn primarily from the ranks of the agricultural labourer. The castes of agricultural labourers were the castes of <u>kamias</u>. (2) In tribals areas the tribal tenants were often forced to become <u>kamia</u> to avoid being forced to work unpaid in the

^{14..} See T.W. Bridge on <u>Kamias</u> in Palamau district. The dispossessed peasantry, landlessness, high rent and threat of <u>begari</u> were found to be the main causes of agricultural labourers becoming <u>kamia</u> there. Letter dated 12 September 1919, from J.A. Hubbak, Secretary to Government to the Secretary to the Government of India, Department of Revenue and Agriculture, Revenue Department, No.7595/S-25R, <u>Proceedings Volume 828</u>, October 1919, Patna State Archives, Bihar.

^{15.} Moral and Material Progress, (1901-02).

^{16.} Letter dated 12 September 1919, Proceedings Volume 828, October 1888, Patna State Archives, Patna.

^{17.} Final Report on the Survey and Settlement of the Maksudpur Estate, Gaya District; p.9.

zamindar's land. (3) Occasionally, the village outsiders became <u>kamia</u> to get jobs in the village and (4) Sometimes the <u>kamias</u> were also undertenants who took to the life of <u>kamia</u> as it ensured jobs and also the land which was the surest protection against uncertainties of labour markets.

Slave labours were employed mainly by big landlords. The <u>kamias</u> were employed by big upper caste cultivators though some zamindars had their <u>kamias</u> too. Slaves were kept primarily for ostentation. On the other hand, the <u>kamias</u> had more than one use (Kosambi, 1956: 348-354). The social institutions of the caste system prohibited the upper caste caltivators from doing any manual labour, particularly working of the plough. This necessitated the employment of <u>Kamias</u>. <u>Grihasthas</u>¹⁶ and <u>Chasas</u>, who touched the plough, were the epitaphs of social indignities which the upper caste cultivators shunned invariably. For the Rajput military aristocracy the touching of plough was an act of indiginities. They, therefore, needed <u>Kamias</u>. The affluents among the other castes also inculcated this culture whenever their affluence enabled them to worm up their ways in social hierarchy.

The other reason for keeping <u>kamia</u> was the necessity of assured and pliable labour supply for Bihar's short agricultural operations limited by the monsoon.²⁰ One spokesman of the Zamindars from Barh in the Patna district testified to the <u>Royal</u> . Commission on Agriculture that the <u>Kamia</u> or 'ploughmen system' which was dying should be revived as there were invariably shortages of agricultural labour in Patna district ²¹ in the busy season. In their notes and memoranda many British officials

^{18.} See Martin (1838, I :159 and 300). <u>Jotiyas</u> (ploughman) are socially contemptible; and <u>Chasas</u> are ploughing tribes.

^{19.} Buchanan's diary is replete with such references. We provide some references as illustrations only:
(a) See Vol I: 110, on Asraf of Bihar; (b) Vol I: 490 and 492: On Brahmin and Kayasthas of Shahabad;
(c) Vol II: 111 and 120; Rajputs of Shahabad touched plough, but because of their violence and power, their impurity was not questioned; (d) Vol IV, 151; Pathan were poor, but did not touch plough. The Sheikhs were also poor, but they were free from such taboo. The British officials enquiring into social and economic life of Bihar villages, more or less, repeated Buchanan. See, for example, Survey and Settlement Report in the District of Gaya, p.63; and L.S.S. O'Malley, Bihar District Gazetteer: Gaya.

^{20.} Note by T.W. Bridge, the Secretary to the Board, quoted in letter no 17-12 of 19/5, dated 26 January, 1920, by T.W. Bridge in his opinion on the <u>Bihar and Orissa Agricultural Labour Bill</u>, 1920, in the <u>Bihar and Orissa Kamiauti Bill</u>, 1920, Legislative Department, Government of Bihar and Orissa, Bihar and Orissa, Patna, 1920; Bihar State Archives, Patna.

^{21.} Royal Commission on Agriculture, Vol XIII: 450. Interview to the Commission by Maulvi Saiyid Mohammad Ahsen Khan, Zamindar and Secretary of the Barh Agricultural Association, Barh, Patna District.

pointed out the relevance of the <u>Kamiauti</u> system in the agrarian relations in Bihar and urged for non-interference on the part of the government in the system on the ground that it ensured control over labourers who often wanted to desert their masters.²²

8.3 Kamias and their income

Buchanan dealt with the income of <u>Kamias</u> and their job conditions in some details. For the Patna district he gave two examples: one from <u>Azimabad</u> pargana and the other from Nawada (Table 8.4). It shows, first, that <u>Kamias</u> do all kinds of work. Not only did they do agricultural work but also attended his master's household works. And he worked throughout the season. When he had no work at his master's house, he worked in his own <u>(Kamia's)</u> field. In Nawada and in Azimabad, where he was not given any land, he worked outside during their off-time. But <u>Kamias</u> off-time being usually the agricultural off-season also, he got only odd jobs for a pittance. In Bhagalpur also, the kamias suffered similarly.²³

Kamia was paid allowance ²⁴ at the rate of 3 sers of grain or 1.5 to 2 paysas and half ser porridge. The rate was less than that of free agricultural labour (Table 8.4, note 2).

Usually <u>Kamia</u> also got a loan and, occasionally, a plot of land. The loan amount varied. In Patna it was Rs.40 or less; in Nawada Rs. 2 as advance (Table 8.4); in Bhagalpur Rs.5 to Rs.20 (Martin, 1839, II). The land may or may not be given. In Azimabad, for example, the <u>kamias</u> were not given any land. In Purnia, they were given just a hut to stay on (Martin, 1838: II). Total income of a <u>Kamia</u> in Azimabad in Patna district, was Rs.16-13 anas and in backward Nawada, it was Rs.20-9 anas (Table 8.4). The higher income of <u>Kamia</u> in backward Nawada is probably explained by the fact that <u>Kamias</u> of Nawada had a plot of land whose produce added to his income. Though the

^{22.} Letter dated 15 oct, 1889, from the Officiating Deputy Commissioner, Santhal Pargana to the Commissioner of Santhal Pargana; Bhagalpur Commissioner Record, Basta - 887 to 885, Bihar State Archives, Patna.

^{23.} In Bhagalpur his hours of work in the field depended on number of bullocks his master had. If the later had 4 bullocks the Kamia worked 6 hours; if he had 6, the <u>Kamia</u> worked 8 hours. In Purnea he worked 9 months in his master's field and worked outside in off-season; (Martin 1838, Vol II: 226).

^{24.} Breman used this term instead of wages. See Breman (1974).

^{25.} Estimated by Buchanan. Buchanan's estimated total of <u>grain</u> and <u>chattu</u> in Nawada does not add up to the total income given in the text. It may be that allowances from other sources were also added to arrive at the total income, See M. Martin, (1838, Vol I: 308).

Kamia's individual income in Azimabad was less than that of Nawada, the total income of the Kamia family in Azimabad was higher than that of the family in Nawada as because the women and children of kamia family in Azimabad (Patna) probably had oppertunities of extra earnings which their counterpart in backward Nawada did not have. The women in Nawada collected Lara and did nothing else. Possibly because of this opportunities of extra earnings, the kamias of Patna district did not get any land.

Buchanan did not give the expenditure of the <u>Kamias</u> for the Patna district as a whole though his report suggested that the free agricultural labourers'wages were higher in Patna district than that of the <u>Kamias</u>. In case of Bhagalpur and Purnea also, Buchanan makes this comparison. In Bhagalpur, on an average a <u>Kamia</u> spent Rs.24 a year, but his allowances from grain and harvest added up to Rs.15. It fell on the womanfolks of a <u>kamia</u> family to make up the deficit by doing odd jobs; e.g. gleaning, reaping etc. (Martin, 1838, II: 226).

In Purnea also the <u>kamia's</u> average expenditure worked out to be Rs.24, and his family's annual earning totalled Rs.20-25 per year, leaving a dificit of Rs.3.75 annually. This deficit <u>Kamia</u> met either by borrowing or by pilfering (Martin 1838, IV: 296-297).

From Buchanan's surveys we can conloude, first, <u>kamia's</u> entitlement had three component: (a) subsistence allowances, (b) loans (c) (sometimes) land for cultivation. But his allowances were less than the agricultural labourers. He had to surrender half of the produce of his land to his employer; then <u>kamia</u> could be set in any menial work, he worked throughout the day; his hours of work were determined in some places by number of bullocks that his employer possessed. He was in constant deficit, which was met either by loans or by pilferage.

From Grierson's <u>Notes on the District of Gaya</u>, written in 1888, we get the details about the material conditions of <u>kamias</u> in Gaya district during the period (Grierson, 1893). Grierson frequently contrasted the material conditions of <u>Kamia</u> with that of <u>mazdur</u>, the casual labourer. He, in fact, asserted clearly that only difference between <u>kamia</u> and <u>mazdur</u> was in their mode of allowance payment and greater independence of <u>mazdur</u>.

Table 8.4 Wages of Kamia

Patna District (Pergana Azimabad)

Nawada area

		Months		Income		337a-al-a-d	Months	Income	
	Worked (No)		•		Grain (Ser)	Worked (No)	Paysas	Sattu (ser)	Grain (ser)
1.	Ploughing	6	384	91	_	6		91	546
2.	Watering	2	180	30	-	1		50	90
3.	Reaping <u>Ati</u> <u>Lara</u>	1 1/2	-	- - -	310	2		• • • • • • • • • • • • • • • • • • •	600 360 1050
4.	Threshing	1 1/2	4 4 ⁴	22	40	1		-	·
5.	No work (as cultivating own plot)	5							
6.	Repairing Master's House	1/2	45	en e	d ·	1 0	-1-61/2	15	90
7.	No work	1/2							
8.	Total		589	143	350	0	-1-61/2	121	2736
9.	Total Incon	ne (Rs.)	16-13-0					1-11-8	18-15-4
10.	Net Income Men (Rs.) Women (Rs Children (R Family	.)	14-0-0 8-0-0 4-8-0 26-8-0					22-1	1/2-0
11.	Kamia also a) Land : 5		thas or 16	to .63 act	- e				

a) Land: 5 to 20 Kathas or .16 to .63 acre

b) Loan (advance): Rs.40 or less

Note

- : 1. For cultivating land Kamia gets seeds and plough and gives half produce to master.
 - 2. Kamia's rate of wage is 3 sers grain or 1 1/2 to 2 Paysas and 1/2 ser broiled porridge Day labourers in Patna gets at the rate of 3/4 sers grain or 3/4 Paysas; i.e. 4 to 6 sers coarse grain. In Nawada they get one-third more than Kamia.
 - 3. Rs.2 to kamia as advance in Nawada.

Source: M. Martin, The History, Antiquities, Topography and Statistics of Eastern India, 1976. We have used the reprint volumes.

Kamias in Gaya district in 1888 got as much daily grain allowances as majdur (3 or 4 sers), but no breakfast which, in case of mazdur, was 1/4 sers grain daily (Table 8.5). Grierson estimated the value of breakfast given to the labourers at 90 ser or Rs.2.25 annually. The Kamia made up this deficit by occasional gifts (usually in payasas) and cooked remnants of the repast that Kamia would receive (Table 8.5). The Kamias, who were mostly lower castes, accepted these offers with gratitude.

Table 8.5Wages of Kamia : Gaya District

	Item	Kamia	Day Labourers
1.	Wage rates	 3 or 4 sers grain daily No breakfast Occasional gifts (pagar) Cooked left over of food 	 3 or 4 sers grain daily 1/4 ser grain "lukum" (breakfast)
2.	Thatching	3 sers daily	1 anna to 3/4 paysas per day
3.	Harvesting	1 sheaf in 20 cut to 1 sheaf in 12 cut	1 sheaf in 20 cut to 1 sheaf in 12 cut
4.	Grain in which salary is paid	Paid in inferior grain like <u>Masur</u> , <u>Khesari</u> , grain	Paid in grains of the crop be cuts at the day
5.	Total Income (essential) for labour	25 Maunds annually	27 1/4 maunds annually or Rs.41.75 annually
6.	Land³	5 <u>Kathas</u> or 0.31 acre or less = 2 maunds or Rs.2 annually. (<u>Kamia</u> gets half of total produce)	
7.	Total Income	Rs.43.75 annually	

Note

- : 1. Kamia gels Rs.10 as advance.
 - 2. <u>Kamia</u> does not get any breakfast. Its estimated annual value is 90 sers or Rs.2.25. Grierson treated this as annual interest of the advance to <u>kamia</u>, which comes to 22.5 per cent per annum.
 - 3. For cultivation of his land <u>Kamia</u> got seeds, cattle and plough and gave his employer half of the produce.

Source: G.A. Grierson, Notes on the District of Gaya, Calcutta, 1893.

Few other aspects of <u>Kamia's</u> allowance are also note worthy First, <u>Kamia</u> got same allowance (3 sers daily) for all work. Second, only in case of harvesting both <u>kamia</u> and <u>mazdur</u> got same amount at the rate of 1 sheaf out of 20 cut to 1 sheaf out of 12 cut (Table 8.5). Third, the cash component of the <u>Kamia's</u> wage was very little, except a few <u>payasas</u> of occasional gift. He got paid in inferior grain like <u>masur</u>, <u>khesari</u> and the like. Mazdur, on the other hand, got the grain of the crop he cut. Fourth, the <u>Kamia's</u> allowance was determined by custom. Goes the aphorism in this connection:

- 1) That a Kamia gets a quarter of the outturn of his work,
- 2) That the usual produce of one plough (i.e. one kamia) is a hundred maunds (Grierson, 1893: 112).

Fifth, in case of <u>majdur</u>, the market demand did have some role. In peak period, at least, <u>majdur</u> got better wages; eg. in transplanting or in thatching. For <u>Kamias</u> the customs determined the allowances which remained the same in all operations.

The Kamia, he reported, was attached to his master who did not give them more than sufficient to keep him in good working order.26 The description of the Collector of Shahabad about the Kamias of Gaya had the same refrain²⁷: Theirs, he said, was the minimum standard of comfort in the district. They were entirely depended upon the masters who treated them as their chattels and the Kamia obeyed them. The kamias were paid 4 sers of rice or sattu during agricultural season and 3 sers off the season. In the village Kajah Musahri, the District Collector of Purnea found the system of hiring plough servant for 8 anas a month which, according to him, resembled the slavery.28 For an advance of Rs.15 to Rs.20 the ploughmen agreed to work half a day everyday for ever for his master. The situation hardly changed even in the early twentieth century. In 1928, the Royal Commission on Agricultural reported that in Hazaribagh, the Kamia's wage was about one-third of the agricultural labourer's wage.29 In his note to the Government of India, J.A. Hubbak, the Secretary to the Government, said that in the Patna district the kamias and their families were given only subsistence allowance in grain. No cash wage was given to them.30 In Darbhanga district the personal servants were called Bahia and his family got only maintenance allowance and occasional gifts.31 In Purnea district the ploughmen Harauri got Rs.1 to Rs.2 a month which might be credited against the advance, (i.e., he did not get anything in hand) or a kind wage in grain, which was usually some maunds of grain annually, except cereals like rice and wheat.32

The Secretary, Board of Revenue, T.W. Bridge, quoting the experience of a civilian, gave the following description of a <u>Kamia's</u> plight:

^{26.} Sterenson-Moore, Report on the Material Condition of Small Agriculturists and Labourers in Gaya District, Calcutta.

^{27.} Letter dated 2nd June, 1888; from John Bosewell, Officiating Commissioner of Patna Division to the Secretary to the Government of Bengal, Revenue Department; in P. Nolan, <u>Enquiry on the condition of poorer classes</u>, Revenue Department, 30 June, 1888; p.7.

^{28.} Letter dated 21st April 1888; p.2. and 2nd May, 1888; p.4, in P.Nolan's Enquiry into the conditions of the poorer classes.

^{29.} Report On the Royal Commission on Agriculture in India Government of India (1828: 434).

^{30.} Letter dated 12 September 1919, No.7596/S-25R, from J.A. Hubbak, Secretary to the Government, to the Secretary to Government of India, Department of Revenue and Agriculture Revenue Department, Government of Bihar and Orissa, Proceedings Vol No.828, Bihar State Archives, Patna; p.3.

^{31.} Letter dated 12 September, 1919, No.7596/S-25R; p.3, Proceedings Vol No.828, Bihar State Archives, Patna.

^{32.} Letter dated 12 September, 1919, No.7596/S-25R; p.3, Proceedings Vol No.828, Bihar State Archives, Patna.

"When asked what on earth he (the <u>Kamia</u>) was doing, he replied that he was a <u>Kamia</u>, that the handful of grain represented his wage for a full day's work, that he found himself unable to satisfy hunger with such a dole unless he increased its bulk, and that experience had taught him that the dust of that particular road was superior to the sweeping of other neighbouring road!".³³

The situation in the fourth decade of the twentieth century was no different basically. In village Darwan³⁴ in Patna district, it was found that (a) the attached labourers were mostly from the families of agricultural labourers; (b) their castes were <u>Chamars</u> and <u>Kahars</u>; (c) the casual labourers, who were mostly poor peasants, were better off than the attached labourers; (d) the attached labourer were given land, called <u>topra</u>, and not less than Rs.300; (e) their wages were less than casual labour and usually in grains (Table 8.6).

Table 8.6Wages of Attached Labourers ³⁵

	Attached Lab	oourers	Agricultural Labourers
1. a)	and	2 sers <u>Khesari</u> or paddy 1 ser sattu	Rs.1 1 ser rice 1 ser Sattu
. b)	Weeding	<u>Nasta</u>	<u>Nasta</u>
2. a) b) c)	operations	3 sers <u>Khesari</u> or paddy 1 ser <u>Sattu</u> <u>Nasta</u>	
3. T	ransplanting	2 ser paddy 1 ser sattu <u>Nasta</u>	

Note

- : 1. Sers are standard ser.
 - 2. We have omitted the estimated money value of wages calculated (in 1948-49 wholesale price) in the original table.

Source:

Report On An Enquiry into the Conditions of Agricultural Workers in Village Darwan.

34. Report on An Enquiry Into the Condition of Agricultural Workers in Village Darwan, (1959), pp.5-11.

^{33.} Mr. T.W. Bridge, Secretary, Board of Revenue, letter dated 4 August, 1920, p.6; in Extracts from the Proceedings of the Legislative Council of Bihar and Orissa, 10 September, 1920.

^{35.} In the official literature the defenition of attached workers' has undergone changes. See for example Report on Intensive Survey of Agricultural Labour, Ministry of Labour, Government of India, Delhi, 1955; Vol 3, p.3. The attached worker are being treated as those who is under contract to work for more than a month. Any contract can put any type of restriction on contracting parties under certain conditions which both the parties agree to abide by. This should be distinguished from the contract of Kamia, the debt bondage, in which the later agrees to forgo his right to choose and his right to decide. Such definitional changes do not mean that the bondage has disappeared from Bihar. See, for example, Prasad (1973 and 1973a).

In the light of these description, Stevenson-Moore's comment on <u>Kamia</u> of Gaya district made in 1880s is worth noting:

"This is the one class in Gaya that is entitled to the sympathies of the philanthropists. The members of the landless labouring class, other than Kamiyas, wonder from village to village in search of work. They are free, and if they get the opportunity for bettering their condition, can seize it, but the kamiya can never have such an opportunity. He is attached to a master who does not give him more than sufficient to keep him in good working order. If he deserts, he is driven back by public opinion When not required by his master, he is allowed to earn what he can The only compensation he derives is that in time of famine his master cannot allow him to die of starvation. He can neither profit by his industry nor suffer from his indolence". 36

8.4 Nature and extent of bondage

Loan is the beginning of the <u>Kamia's</u> life of bondage. The necessity of loan arose for many reasons. Some illustrations are given below:³⁷

- (1) <u>Sohan Bhuinyan</u> of village <u>Diha</u>, District Bihar, took an advance of Rs.24-14 from Jainil Singh, a Rajput of <u>Diha</u> and agreed to work as <u>Kamia</u> and menial servant for him. He voluntarily bounded himself and his decendent to plough on <u>nakdi</u> and <u>bhaoli</u> lands of Jinu Singh and to grow cotton, sugarcane etc. and work wherever the lands of Jainu Singh might be situated and to do all menial work without protest.
- (2) Somar Raiwar, son of one Gayan Raiwar, of Andheri Bari, district Gaya, was by profession a labourer and a Kamia. He had taken loan from Babu Bhikhari Singh of the village to meet his expenditure in food and clothings. Since nobody would give loan to him without Kamiauti agreement, he requested Babu Dhanpat Singh, son of Babu Gajadhar Singh, of Andheribari, by profession agriculturists and service holder, to advance a loan of Rs.13-4 on Kamiauti bond executed on stamped paper. He bounded himself and executed the document agreeing to assist the agriculturists with his wife in all work of Kamia and in all agricultural operations like sowing etc.
- (3) One <u>musahar</u> of village <u>Mablepur</u>, district Manghyr, bounded himself for Rs.5 in cash to celebrate his marriage, to Babu C.D. Rajput, and agreed to plough, sow, irrigate, and reap the fields of C.D. and perform all the duties of <u>Kamia</u> or bondmen.

Sohan Bhuinyan, a Chotanagpur tribals, took loan for unspecified reason. Somar Rajwar took loan to pay off an earlier loan incurred to pay off another loan. And the musahar had taken loan to meet his marriagé expenses. None of these three had land and their income was not enough either for meeting the expenditure of their sustenance or their social necessities. This made them to sign the bond.

^{36.} Stevenson-Moore, Report On the Material Condition of Small Agriculturists and Labourer in Gaya, Calcutta, p.29.

^{37.} First two examples are from Report On the Survey and Settlement Operations in the District of Gaya (1911-1918), and the second from Martin (1877, V: 113).

In Table 8.7, we have presented the nature of these bonds and their reasons in detail. It is taken from various sources and in presenting them we have adopted Finley's form of presentation. Finley (Finley, 1964: 233-249), in his article "Between Slavery and Freedom", suggested that in any analysis of the ancient slavery "the antinomy, slave-freed on," should be avoided. Instead, he says, the <u>social status</u> in such societies could be viewed on a broad spectrum of continuous of statuses between slavery and freedom. In the light of this, he suggested a catalogue of right and duties on the basis of which one can analyse the 'freedom' and 'unfreedom'.

Table 8.7Rights and Duties of <u>Kamia</u>

	Item (suggested by Finley)		Remarks on Kamia's rights and duties
I	Power/lack of power over human labour and movements (one's own as anothers):	3.	No power over his own labour (work every day, whole day and does all work). Can not change job. Can not leave village (e.g. to visit relatives). Can not migrate.
	Privileges in the area of family:	2.	Bond: sometimes heriditory; sometimes son compelled to sign new bond to repay father's debt No protection against famine (the master sometimes leaves <u>Kamia</u> on his own during famine, leaving him to join relief camp). Often wife and son's labour is bonded.
III	Power (or Immunity) from punishment :	1.	Master can punish <u>kamia</u> for absence, negligence of work etc. (Day's wage is added to loan, if absent for a day; if deserted, interest is added to loan).
IV	Privileges and liability in judicial process:	1.	Bonds are illigal; but has social sanctions.
v	Privileges of (or Absence of) Social mobility	1.	Desertion is difficult (Customs and public openion discourage it).
VI	Claim (or no claim) to Property :		이 그 사람들은 사람들이 어려워 못 하고 있었다면 교육을 하면 모든 사람들이 가장되었다. 그리고 있는 경험을 그렇게 나를 다른다.

Sources: 1. Report on Survey and Settlement Operations, relevant districts; (2) W.W. Hunter; Statistical Account of Bengal, relevent volumes; (3) Grierson. Notes on the Districts of Gaya. (1839); (4) Sterenson-Moore, Report on the Material Conditions of Small Agriculturists and Labourers of Gaya.; (5) Report on the Royal Commission on Agriculture in India, (1928); (6) P. Nolan, Enquiry on the condition of the poorer classes 30 June, 1888. (7) Letter dated 12 September, 1919, No.7596/A-25R, Revenue Department, Proceeding volume, October 1919, Government of Bihar and Orissa,; (8) Letter dated 15 October, 1889, Bhagalpur Commissioner Records, basta 887-88.

Finley's analysis was based on the slave societies of Europe and Near East. Naturally he stressed on the decisive role of the social status in the analysis. Our context is the colonial North Bihar where the market relations have already penetrated in this society. At the same time, at the village level, the traditional elements like caste hierarchy, customs and tradition have persisted.

The <u>Kamiauti</u> agreement put severe restrictions on the <u>Kamia's</u> movement. <u>Sohan Bhuinyan</u> and <u>Soman Rajwar</u> agreed to do all the work of <u>kamia</u> and also agricultural work. The agricultural worker had his freedom once the fieldwork was over. But for these <u>kamias</u>, they had other jobs to do after the field work at his master's home and <u>Khalihan</u> was completed.³⁸ The <u>musahar Kamia</u> of the Monghyr district had these conditions clearly written in his agreement: ³⁹

"The A.B. binds himself to continue in the service of his master, C.D. and never to refuse doing any work imposed on him, morning and evening, day and night. He will be present and ready to work and he will never absent himself even for a visit to a friend or relation without visit".

The <u>Kamia</u> thus did not have freedom of his movement. He could not go to work for others without his master permission; he could not leave his village to meet his relatives without permission; he had to work whole day; all the time (Table 8.7; item I). In Patna, Gaya, Shahabad, In almost everywhere, these were the conditions of <u>Kamiauti</u> agreement, written or oral.

Conditions for leave were usually written in the agreement: <u>Somar Rajwar</u> of Gaya, for example, agreed to put his son in the service of his master if he happened to go out on leave for a day or two. During his absence his master was given all the authority to make his son work for him in the manner he wanted. ⁴³ In the case of A.B. <u>musahar</u>, the agreement was that if he was absent, his day's work would accumulate and he would be "liable for such damages as his Majesty's Court of Law may direct. ⁴⁴

^{38.} See Final Report on the Survey and Settlement Operations the District of Gaya (1911-1918).

^{39.} Final Report On the Survey and Settlement in the District of Gaya.

^{40.} Letters dated 12 September, 1919, from J.A. Hubbuk, Secretary to Government to the Secretary to the Government of India, No.7506/S-25R, Revenue Department, Government of Bihar and Orissa, Proceeding Vol 828, October, 1919, Patna, pp. 2 and 3.

^{41.} O'Malley, Gaya District Gazetteer, p.153.

^{42.} L.S.S. O'Malley, Shahabad District Gazetteer, p.89; also, see letter dated 2nd June, 1888, from John Boxwell, Officiating Commissioner of the Patna Division to the Secretary to the Government of Bengal, Revenue Department; in P. Nolan, Enquiry into the condition of the poorer classes.

^{43.} Final Report On the Survey and Settlement Operations in the District of Gava.

^{44.} Final Report on the Survey and Settlement Operation in the District of Gava.

Absconding, desertion and migration, without permission could lead to severe retribution from the master, if he could lay his hands upon the <u>Kamia</u> (Item III Table 8.7). At the time of the <u>Kaminuti</u> agreements, the agricultural labourers had to assent to the penalty provisions. <u>Sohan Bhuinyan</u>, for example, put thump signature on his own punishment in these terms.⁴⁵

"If at any time I abscond I shall be liable to be brought back by the said <u>Jainu</u> <u>Singh</u> by force and shall offer no objection".

In one case it was agreed that the defaulting <u>Kamia</u> would be punished by overwhelming interest on the agreed loan. In Purnea, the absconding meant that the <u>Kamia</u> had to pay interest on the entire loan amount, or had to work for two days without any allowances. According to one <u>Kamiauti</u> agreement bond bought to the Patna Court, the <u>Kamia</u> had to pay higher rates of interest - one anna in this case - for absent without permission. The interest thus became the binding clause in the <u>Kamiauti</u> agreement (Table 8.7 No. III).

The Kamiauti agreements were practically hereditory. In some cases it was explicitly written in the agreement, as in case of <u>Sohan Bhuinyan</u>. 49 and <u>Somar Rajwar</u>. 50 <u>Babu Dhonpat Singh</u>, <u>Somar</u>'s master, was given free hand to realise the money with interest from any of his property that he <u>(Dhanpat Singh)</u> could lay his hand on. Neither <u>Somar Rajwar</u> nor his descendent had any right to oppose. 51

In cases where it was not explicitly written as hereditary, the <u>Kamiauti</u> agreement had tendencies to became hereditary. This was reported to be particularly so in the Patna Division: The conditions were such, J.A. Hubbak wrote quoting other officers, that the repayment was difficult and the status tended to be hereditory.⁵² The social attitudes also contributed to their continuation. No son would normally refuse to pay fathers debt. It

^{45.} Final Report on the Survey and Settlement Operation in the District of Gaya.

^{46.} Letter dated 12th September 1919, from J.A. Hubback, Secretary to Government to the Secretary to the Government of India, Department of Revenue and Agriculture No.7596/S-25R Revenue Department, Government of Bihar and Orissa, Proceeding Volumes 828, October, 1919.

^{47.} Letter dated 12th September 1919, Proceedings Vol.828, October, 1919.

^{48.} Letter dated 12th September 1919, Proceedings Vol.828, October, 1919.

^{49.} Final Report on the Survey and Settlement Operations in the District of Gaya (1911-1918).

^{50.} Letter dated 12 September, 1919, Proceedings Vol. 828, October, 1919.

^{51.} Letter dated 12 September, 1919, Proceedings Vol. 828, October, 1919.

^{52.} Letter dated 12 September, 1919, from J.A. Hubback to Secretary to Government, to the Secretary to the Government of India, Department of Revenue and Agriculture, No.7596/S-25R, Government of Bihar and Orissa, Revenue Department, Proceeding Vol 828, October, 1919.

is socially bad. Then the Hindu law made it incumbent on a son to satisfy debts incurred by father. For the <u>Kamias</u> son this meant renewal of bondage. Further, when the <u>kamia's</u> son needed money whether for food, etc or for social function, he could get it only from his father's master with whom his (<u>Kamia's</u>) family usually had long relations. He had no land or other assets to get loan from others. Neither do the other cultivators would easily oblige him by offering him (<u>the Kamia's son</u>) the debt, lest it might annoy the cultivators to whom his father worked as <u>Kamia</u>. The result was that he went to his father's master for loan, wrote bond and worked as <u>Kamia</u>.

Further the continuation of bondage was ensured by certain other factors inherent in the relationship between the <u>Kamia</u> and his master. No cultivators wanted the repayment of loans. No interest was charged normally though there were exceptions to this. In Champaran, for example, the compound interest was charged on the loan even when the <u>Kamia</u> was working with the master. In other area it was presumed that the <u>Kamia</u> worked to pay the interest and the allowance given to him were meant for his survival. The question of interest came when the <u>kamia</u> asked to be released. The other occasion in which the interest and its repayment was considered was when the master wanted to penalise the <u>Kamia</u> for one reason or the other. The Collector of Monghyr, Mr Lockwood, put the reality succintly.

"It is said that not only are the bonds never liquidated, but that the bond holder would refuse to accept the money if tendered; and, so far I can learn, the simple clown gets so confused regarding what is due in shape of compound interest, that it never enters his head to liquidate his debt.⁵⁵

Sohan Bhuinyan and Somar Rajwar⁵⁶ provided illustration for another form of control: the exorbitent quit money. Sohan Bhuinyan, for example, agreed to pay nakdi and bhaoli produce of one plough and Rs.100 (against Rs.24-14 anas loan) if he had refused to return to his master after descrition or offered resistence to that effect. Somar Rajwar, the other Kamia, agreed to pay interest if and when he decided to quit: "If I happen to go away elsewhere I shall pay to the said Babu Dhanpat Singh interest of one anna per rupees per month until the aforesaid loan is paid off". 57

^{53.} Letter dated 12 September, 1919, Proceedings Vol 828, October 1919.

^{54.} Letter dated 12 September, 1919, Proceedings Vol.828, October 1919.

^{55.} See Hunter (1877, XV: 113).

^{56.} Final Report on the Survey and Settlement Operation in the District of Gaya, (1911-1918).

^{57.} Final Report on the Survey and Settlement Operation in the District of Gaya, Appendix (II).

The other procedure to make repayment difficult was by making it compulsory for the <u>Kamia</u> to pay the loan amount in lump and at a particular date. Usually the date was the month of <u>Jeth</u> (May-June) of a ⁵⁸ particular year. <u>Somar Rajwar</u>'s agreement, for example, mentioned <u>Jeth</u> of 1916 as the date of repayment. This was the traditional month for the beginning of all agricultural operation in North Bihar; and it was also the leanest month for everybody which made the procurement of the quit money extremely difficult. Invariably, unable to raise his quit money, the <u>Kamia</u> would request for renewal of the bond which the cultivator would readily agree. It also enabled the cultivator to make the contract yearly and thus maintained its legal validity. The district officials from Purnea provided evidence of the existence of such methods of continuation of <u>Kamias</u> bond in his destrict. ⁵⁹

"A definite date for repayment is named and, in this district, as in Gaya, a labourer can theoretically free himself by repayment of loan. Actually of course he does not do so; the date given in the bond is merely to avoid the debt being barred by limitation and in most cases the debt is renewed".

The social practices, customs and traditions were also weighted against the <u>Kamia</u>. In some parts of Bihar it was thought incumbent on son to repay father's debt. The <u>Kamia's</u> son obeyed the norm. In <u>Betiaha</u> sub-division, the cultivators often evoked the provision of the Hindu law that son must repay father's debt to take the <u>Kamias</u> son to criminal courts whenever he refused to pay his father debt.

The deserting <u>Kamia</u> had to face popular rejection also. Public opinion in the Patna district discouraged desertions: "He who takes loan, but subsequently deserts is, bad character". ⁶² Then the desertions did not mean freedom from bondage. In Gaya, for example, the custom was that the first ryots who had given food to the fleeing <u>Kamia</u> would take the later under his bondage. If the former master found out the deserter, he could either take loan from the new master to pay the loan of the former master or his old master can pay the <u>Kamia</u>'s new master and took back his old <u>Kamia</u>. In either case the <u>kamia</u> remained bonded. ⁶³

^{58.} Final Report on the Survey and Settlement Operation in the District of Gaya, Appendix (I).

^{59.} Letter dated 12 September, 1919, from J.A. Hubbak, Secretary to Government to the Secretary to the Government of India, Department of Revenue and Agriculture; Proceedings Vol 828; October 1919.

^{60.} Martin (1838: 307).

^{61.} Letter dated 12 September, 1919, Proceedings Vol.828; October 1919.

^{62.} Final Report on the Survey and Settlement of Patna District.

^{63.} Final Report on the Survey and Settlement Operation on the District of Gaya.

No official or private account of revolts or mass descrition or migration by the <u>Kamias</u> could be found. In fact, the only evidence of the <u>Kamia's</u> opposition and its form can be inferred from the punishment provision in the <u>Kamiauti</u> agreement reported by the officials: "The opposition of the <u>kamias</u> is normally in the form of refraction, negligence of work and flight". One such instances was given by the district magistrate of Shahabad: "The usual allowance of grain given daily is never cut, even though the <u>Kamia</u> is refractory. He is then punished by personal chasatisement.⁶⁴

The refractor <u>Kamia</u> was seldom punished for his refraction as his employer-cultivator was scared that the former might take to flight. On the other hand, the <u>Kamia</u> seldom actually left his masters as they hardly had any place to go. The <u>Kamias</u> almost always refused the urgings of the British officials to migrate. The Collector of Monghyr reported in 1870s that whenever he had asked the low caste <u>Kamias</u> to migrate they replied that their master would not allow them to do so. ⁶⁵ In 1919, in the Patna district the father of a <u>Kamia</u> enlisted as artilary driver, induced his father to write to the Lt. Governor to discharge him (the Kamia) on the false ground that he is a minor. ⁶⁶

Conclusion of this chapter can thus be summarised. First, the <u>Kamia's</u> were employed by mainly the upper caste cultivators, for (a) their social taboo in touching the plough and (b) for assured and timely labour supply. Second, the <u>Kamias</u> were mainly the former landless agricultural labour class. In some cases they were also former artisans and under-raiyats. Third, usually, therefore, they were from the same castes as that of the agricultural labourers, artisans and under-raiyats. In some cases they were also from primitive castes and tribes. Fourth, these classes became <u>Kamias</u> because of the uncertainties of jobs in agriculture. Fifth, the <u>Kamias</u> wage was lower than that of the agricultural labour; it was in grain; and in coarse grain. The <u>Kamias</u> did all kinds work, in all hours of the day, and every day of the year. Sixth, the origin of <u>Kamias</u> unfreedom was loan. The necessity for loan arose usually either to meet the expenses of the daily needs or marriage expenses or to pay off past loan. Seventh, no interest was normally charged on the loan. It was, however, invariably presumed that the <u>Kamia's</u> work to pay

^{64.} Letter dated 2nd June, 1888, from John Boxwell, Officiating Commissioner of Patna Division to the Secretary to the Government of Bengal, Revenue Department, in P. Nolan, <u>Enquiry into the condition of the poorer classes</u>.

^{65.} Hunter (1877, XV: 113).

^{66.} Letter dated 12 September, 1919; Proceedings Vol.828, p.3.

the interest, the wage paid to them was for their survival. Eighth, the question of interest came only when it was necessary to punish the Kamia or to prevent him to earn his release. Ninth, the other ways to prevent kamia's from earning their freedom was to fix inflated quit money and to fix only one date of release. Tenth, the Kamiauti agreement could be written or oral. Both were illegal. Despite this it survived due to a) economic necessity and (b) social customs, tradition and practices. Eleventh, the social attitude to work, to debt (that son must pay father debt), to Kamia, who fled his master, Hindu law, the caste hiererchy etc. tended to support and perpetuate the Kamiauti system. Twelveth, no effective opposition to their unfreedom came from the Kamias at least during the colonial period, except in the form of indolence and inefficiency.

Chapter IX

THE CASUAL LABOUR OR MAJUR

The casual labourer or majur ¹ is the last of the five categories of agricultural labourers that we have taken up for study. They are usually employed for one agricultural operation; e.g., for harvesting or for irrigating the fields. But they can be appointed for a day or two also for various other agricultural work, for example, for bundh repairing work or as replacement to a sick ploughmen or a weeder etc.

The internal migration is a striking feature of these labourers in North Bihar.² This migration were caused by: (1) A drought or a famine, which might prompt labourers to move to a nearby urban centres or other unaffected areas for relief and succour; (2) by opportunities for jobs and higher wages at a particular area at a particular agricultural season.

The timing and direction of internal migration depended on the cycles of mansoon.

This demand for agricultural labour, with its fluctuations, has been picturised next page:

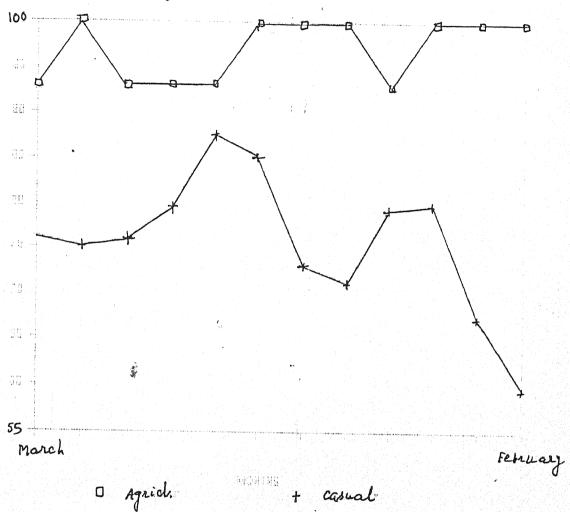
The information for this picture has been taken from Agricultural labour Enquiry Committee Report ³ which gives information for 1950-51 - period which falls outside our reference period, but not irrelevant for that reason as broad indicator. The picture shows two things clearly: (1) The attached labourers were employed for longer period and their job situation was less fluctuating than the casual majur; (2) The jobs of the later was more fluctuating. It had two highs: one in July - August and the other in November - December; the first high was higher than the second. The period between August and November were the slack periods.

^{1.} Generally 'majur' meant casual labour in North Bihar. But the term varied from region to region: it was 'jan' in south east Bihar; majur in Tirhut; banihar in Shahabad and other places; kamariya (he who wears a blanket in waist) in East Tirhut; Kamiyan in Patna, Gaya and South Monghyr; roja in South East Tirhut; etc. see Grierson, (1975:313-314)

^{2.} The official literature is full of discussions on migration. See, for example, <u>Royal Commission on Mol. III.</u> Evidence volume on Bihar, Calcutta.1928; Bihar District Gazeteers of Hunter

^{3.} Agricultural Labour Enquiry Report on Intensive Survey of Agricultural Labour. 1955, Vol. 3, Table 3; p. 51.

Employment of Casual Labour



9.1 Pattern of migration

In the agricultural slack season which roughly falls between August to October the main demand for labour came from public works departments, either directly from the Government or indirectly through the contractors. For the works like digging canals, strengthening of bridges etc, the demand was high for such castes as Nunia and Beldar, and in some places, Bind, because of their traditional skill. The tribals were also preferred. The sights of tribal groups trudging their way from Chotanagpur to North Bihar was a common sight in North Bihar during this period. From some North Bihar districts the labourer went to distant South Bihar district of Palamau. The people also would come to Shahabad for work in the Son canal (Hunter, 1877, XII: 186). The labourers from neighbouring United Province would also visit North Bihar during the period.

The main migration season, however, was November and reached its peak in December. And the class involved in the seasonal migration were primarily the casual labour. This was the <u>Aghani</u> crop harvesting season. The season ended in March-April, at the beginning of the hot season when the labourers returned to their home with their share of crop.

The speccific timing and direction of this migration varied from region to region. From Saran the labourers used to start moving at the end of the <u>Durga Puja</u> (the worship of Goddess Durga) and continued till the end of December (Hunter, 1877, XI: 269). They travelled through Muzaffarpur and Darbhanga to the Northern Districts of Bengal and returned home in the month of March-April.

From Shahabad and Patna the migration followed the same pattern: they used to set out at the beginning of cold season, working in road constructions, and in the railways initially and then in the fields harvesting crops, returning home before the start of the monsoon i.e. by June. Nunia from Gorakhpur, in the neighbouring United Province, came to Champaran for work in December - January.

See, for example, Census 1921, Vol. VII, Bihar and Orissa, Part I, Report by P.C. Tallant; Also, Malley's, Bihar and Orissa District Gazetteers: Shahabad, p.88; and Hunter, (877, XI: 269).
 See on this O'Malley's, Shahabad District Gazatteer and Patric District Gazetteers.

See on this O'Malley's, <u>Shahabad District Gazatteer</u> and <u>Patna District Gazateers</u>.
 Nunias are artisanal castes. They are maker of salt-petre, Hunter (1877, XII: 239).

The labourers came to Bhagalpur from the <u>rabi</u> tract in October-November for <u>Aghani</u> paddy harvesting (Hunter, 1877, XIV: 53). They would go back in the month of March-April to the <u>rabi</u> tract again for harvesting.

In Monghyr the harvesting season were seasons of great internal movement (Hunter, 1877, XV: 54). In December, the people from <u>rabi</u> tract in North of the Ganges crossed over to cut the rice in <u>parganas</u> like <u>Maldah</u>, <u>Birthazari</u>, <u>Jamui</u> and <u>Kharagpur</u>, returning in the following months with their share of crop. When the <u>rabi</u> crops of pargana <u>Pharkiya</u>, <u>Bhusari</u> and <u>Naipur</u> ripen in April, the labourers from southern Monghyr came crossing the river for harvesting.

The collector of Purnea reported the movement of mass of labourers from the western districts of Tirhut, Chapra and Gazipur passing through Purnea to Bengal in October and returning back home before the onset of the rains. In 1873 the Purnea collector met one such group of kahar labourers going to East Bengal in search of jobs (Hunter, 1877: XV). The collector of Tirhut also reported similar passage of labourers through Saran in October to December to the east, to Purnea, and also about their return in the next spring.

Seasonal job shortages at home and the lure of jobs in the neighbouring land, particularly income in kind, were the pushes and pulls that encouraged these landless labourers to migrate. Satinath Bhaduri brought out the complex interplay of these two factors in the case of female labours of Purnea thus (Bhaduri, 1388: 98):

"In the month of <u>Kartik</u> (October-November) and <u>Aghan</u> (November-December) the income of the male members of the <u>Tantwa</u> ⁸ becomes somewhat uncertain. The work of <u>gharami</u> (thatching) becomes less yet the work of clearing the well do not start till then. Because of this parhaps, the females of <u>Tantwa</u> go out for rice cutting in <u>Aghan</u>. They return towards the end of <u>Pus</u>. Most of them goes to the east into <u>Maisi Jamaur</u>, and <u>Rutwa</u> thana. Income in these areas are more; So what! "Water is bad"; "then there is Malaria". It is because of this most of the time the women folks of <u>Tantwa</u> goes to such places as <u>Kamaldaha</u>, <u>Badhadi</u>, <u>Dhokardaha</u> in the west. In these areas the water is good. But the demand for labour is less in the west; so thousands and thousand of male and female labour of Monghyr and Bhagalpur, comes to this side (Purnea) during the (rice) cutting period; by crossing the Ganges and the Kosi".

Thus the specialised jobs for the castes were seasonal.It did not provide all time work rendering menfolks un-employed and forcing the womenfolks to look out for

^{7.} The Collector even talked about the plan for developing a road system to ficilitate the movement. See Hunter (1877 : XIII).

^{8.} Tantwa is weaver sub-caste of Bihar; see Risley, (1891, Vol I: 295).

jobs. The harvest season provided such oppertunities; so they migrated often en masse.

This migration was basically from areas of lean agricultural period to the areas of harvesting. In the period between October-December its direction was towards the east to the harvesting of Aghani paddy; and also perhaps to the tea gardens of East Bengal. The journey back home to the west would begin in spring. They would come back to cut the <u>rabi</u> crops. In the slack period between mid-August to October there used to be a mini-migration of landless to the urban centres and areas of railway construction, public works, and works of irrigation canals. The pulls were usually higher wages. The labourers travelled with their entire family of men, women and children. For the women of the labouring classes this was the best opportunity to earn their annual keep.9

9.2 Growth of the agricultural labour

These labourers were mostly landless though it also included dispossessed artisanal castes like Nunia, Kahar, and the like. It was very difficult to quantify the number of these landless agricultural labourers and their growth. The official documents and administrative reports had made no systematic effort to quantify their number and their growth or otherwise. Only sustained source of information is the Census but that too from 1871-72 onwards. The Census, however, poses a number of problems.

In the fifties Patel (Patel, 1952: 149-150) made a detailed study of the growth of the agricultural labour in India and Pakistan on the basis of the census data. The thrust of Patel's argument was this: (1) At the apex of the rural society was the 4 million propertied rentier class. At the base was 42 million landless labourers, including 3 million bonded labour. In between existed 37 million petty proprietors and tenants at will, each cultivating 5 acres of land or less and 28 million middling tenants tilling 5 acres or thereabout on an average. (2) The number of landless agricultural labourers were increasing rapidly. (3) The growth of this class was associated with disintegration of traditional institutions, rapid dispossession of peasantry and high concentration of land. (4) This development was uneven and were signs of arrested capitalist development.

Almost all District Gazateers give details about this internal migration. We have given specific reference
of them as and when it was necessary. For one interesting account of this migration, See, Harrison,
(1890: 274-303). For a vivid description of the life styles of the migrant labourers in Purnea region, see
Bhaduri (1388 Bengali year :90-105).

This pioneering work of Patels work has, however, two shortcomings: (1) His work does not take full cognisance of the problems of using census data which form the main basis of his work (Krishnamurthy, 1972). (2) The other is his theoretical approach. The development of capitalist relation in a colonised society may quite be possible along with the <u>strengthening</u> of traditional institutions. The growth of agricultural labour in these societies may be associated with further strengthening of bondages etc. Patel's ¹⁰ theoretical framework does not provide for this complex pattern of change in a colonised society.

On the other spectrum of this discussion stands Dharma Kumar (1965). Approaching the problems of quantification from the point of view of castes and caste occupation, Kumar (1965) criticised the nationalists and Marxists on two counts mainly: (1) They overemphasised the growth of agricultural labourers during the British period. This class, she said, existed even in the pre-colonial days. (2) They also overemphasised the fact that large bodies of peasant proprietors and artisans were dispossessed during the British days and became landless.¹¹

On Kumar's first point that the agricultural labourer existed even in the pre-colonial period, Bhattacharya (1776: 86) pointed out that this viewpoint was the result of confusion of categories. The presence of agricultural labour, Bhattacharya argued, that Kumar found in the British documents in the pre-colonial and early British period was the result of the caste system and the Hindu upper caste domination. The landlessness created due to commercialisation and spread of capitalist relation is a different category altogether.

^{10.} To be sure it needs to be noted here that Patel's argument is comprehensive enough to point out (1) that the growth of agricultural labour co-existed with dwarf-holding and various forms of bondage; (2) that the growth of agricultural labour under this situation, while signifying rapid destruction of pre-capitalist relations, showed arrested growth of capitalist relation. Our objection is that Patel implicitly assumed a linear trend of development. He fails to point out that the colonial state is unwilling, as also unable, to displace totally the pre-capitalist relations in the colonies as it did in their own country. They tended, on the other hand, to modify and maintain them as it suited their surplus appropriation from the colonised country. See Patel (1952:145,147-153) For the role of colonial state in appropriation of surplus from the colony, see Bagchi (1982:21-31).

^{11.} It might be noted here that Dharma Kumar's work found enthusistic support from a section of foreign historians and their counterpart in India, who sought to rewrite the history of India during the British period sans colonialism in the name of reinterpreting the Indian history. For an understanding of the thrust of this new histriography as also its critique, see, among others, The Indian Economic and Social History Review, Vol. V, No.1, March 1968 and also Social Scientist Vol.12, No.12, December, 1984.

Kumar's second point about the dispossession of peasantry and artisan has been convincingly refuted by scholars like Bagchi (1976: 1976a) and others. Neeladri Bhattacharya (1985) has also shown logical inconsistencies in Kumar's argument on this point from her (Kumar's) own work.

We have presented the census data on agricultural labour of North Bihar in two tables: (1) The Table 9.1 shows the growth of number of male and female agricultural labour separately from 1881 upto 1931 and (2) the Table 9.2 gives the percentage of growth of male agricultural labour of North Bihar in relation to total population.

These tables have been adjusted in order to obviate some of the limitations of the census data. In the initial censuses the coverage of the census operation itself created problem. The 1871-72 census covered British India only. It did not cover the native states. In our table, therefore, we have dropped 1871-72.

The economic classification of 'worker' also raises some difficulties. In 1881 only one question was asked to the worker about his work and his answer was recorded. The purpose was to know their occupation only. In 1891 the purpose was to find out supporting powers of each occupation and, therefore, the means of subsistence of the whole population was taken into account while collecting census data. ¹² In 1901 there was switch again to the 'actual worker.' In 1901, however, as compared to 1881, the 'actual worker' was distinguished from 'dependents' and not only the subsidiary occupation of the actual worker but also the means of subsistence of the 'dependents' was collected. In 1911 and 1921, by and large, the same method of classification was followed with only minor modifications in details in 1921. ¹³

The 1931 census classification¹⁴ was again modified substantially. The worker was devided into earner and working dependents but no attempt was made to record the means of subsistence of working dependents. This added further to the already existing problem of how to draw the demarcating line between 'actual workers', 'working dependents' and 'dependents' (Thorner, 1962: 157). Because of these difficulties we dropped 1891 from our analysis and have taken only the <u>actual worker</u> for the census years of 1881, 1901, 1911, 1921 and 1931. For 1931 we have added 'earner' and 'working

^{12.} Census, 1891, General Report, J.A. Baines; p.88.

^{13.} Census, 1921, Report, Vol. I, Part I, Chapter XII; p.236.

^{14.} Census, 1931, Report (W.G. Lacey), Vol. VII, Part-I; p.179.

^{15.} Census 1931; p.186.

dependent' in order to make the figures for actual workers comparable with the preceding censuses.¹⁵

The information on female population in the censuses creates another almost intractable problem. As it is, it was difficult to distinguish between 'actual workers' and 'dependents' in any family in the rural society of North Bihar in the nineteenth and early twentieth century when division of labour were not very marked. It was all the more so in case of the female population. J. A. Bourdillon commented that in the 1881 census the occupation pattern of female was most unsatisfactory for a number of reasons: (1) The instructions to enumerators were vague; (2) often the occupation of male was entered as the occupation of female; (3) the female servants engaged in household works were entered as domestic servants. For the analysis of female occupation, said Bourdillon, ¹⁶ it was difficult to know how many of them were housewives and how many were real workers. Further, according to Bourdillon, the female population included in general labour in all probability were those who were actual worker.

In 1911 E.A. Gait pointed out that the female population for 'actual workers' and 'dependents' were not more than an approximation to the truth. It was difficult to say, Gait added, when a female weaver should be treated as housewive or a worker. The female participation in work was affected by caste, religion and even the nature of agricultural operation. In transplanting and weeding, for example, the female labour was preferred. In many areas, and particularly among the upper castes, it was socially derogatory for women to work. This affected the attitude of the informant. In such areas and among such castes, there was tendency to report female workers as 'dependents'.

In 1931 again, the rise in the number of female domestic servants were the contribution of the enumerator's confusion rather the changes in real occupation pattern. It was always socially respectable, said, J. H. Hutton, the census commissioner, to show one's own wife as engaged in domestic work rather than in the field. ¹⁸ This more than anything else inflated the number of female dependents.

16. J.A. Bourdillon, Census of Bengal, 1881, Vol. I, Calcutta, (1883), p.184.

18. Census, 1931, vol. I; p.274; (1984 reprint).

^{17.} In harvesting and transplanting the female participation was high, particularly among the lower castes. In threshing job which was usually carried on in the <u>Khalian</u> (courtyard) even the females of upper castes participated, particularly among the poor.

In this study these problems have been solved by presenting the figures for male and female agricultural labour separately and using only the male agricultural labour population in proportion to total male agricultural population to reflect on the extent of growth of agricultural labour in the period under review.

In any calculation of agricultural labour the category 'general labour' can not be ignored. These two categories — labour and general labour — are, in fact, not entirely exclusive. It all depended on the timing of the census operation. The same labour could be recorded as field labour if the census was taken in the month May-June and as an agricultural labour if it was in July-August, resulting in the substantial transfer of number from one category to the other. These two categories, J. J. Martin commented in 1921, should always be colated.¹⁹

The category 'general labour', however, has other related problems. The scope and definition of this category have been changed frequently from one census to another. In fact, any class/occupation which cannot otherwise be identified and classified into any specified census category has been put into this category resulting in the frequent changes in its number through census redefinition alone. For example, the coolies which were put into 'unspecified labour" in 1891 was shifted to farm labour in 1901.²⁰ In Bihar the number of field labourers dropped in 1911 as because a large number of them were recorded as 'unspecified labour' which were treated as farm labour in 1901.

This problem has been solved here by adding 80 percent of the general labour (or unspecified labour) to the category of agricultural labour in each census in our tables on a pro-rata basis.²² This other 20 per cent has been assumed as urban labour. This estimate has been made after taking into account the ratio of those dependent on agriculture and the total population in North Bihar in the four censuses from 1901 to 1931.

With so many constraints in the data it is extremely difficult to say anything definitely from Table 9.1 and 9.2 except certain broad indicative trend. These are noted in the next page:

^{19.} Census, 1921, Vol. I, Part I, Chapter XII; p.246.

Census, 1901, Report, Vol.I,p.192.
 Census, 1901, Report, Vol.I, p. 413.

^{22.} Krishnamurthy has added the entire 'general labour'to the agricultural labour. (Krishnamurthy, 1972:331). Bhattacharya takes 75 percent for Punjab (Bhattacharya 1985:131).

Table 9.1

Agricultural Labourers of North Bihar (in thousands)

	Male			Female						
	1881	1901	1911	1921	1931	1881	1901	1911	1921	1931
Paina Division					-					
Patna Gaya Shahabad	136 157 142	83 148 109	107 156 110	98 128 94	112 159 130	185 151 162	77 158 159	120 204 149	89 100 120	97 157 148
Tirhut Division										
Saran Champaran Muzaffarpur Darbhanga	63 86 109 120	51 127 144 176	50 132 185 207	37 112 167 194	57 139 236 232	94 57 47 49	106 102 57 137	99 125 85 114	55 97 84 108	72 108 125 107
Bhagalpur Division										
Monghyr Bhagalpur Purnea	143 122 130	131 127 152	168 186 185	144 164 137	168 189 212	133 100 65	89 102 67	198 185 102	139 178 80	135 163 91
North Bihar Bihar (including Chota Nagpur estate)	1214 1456	1253 1510	1491 3609	1280 1483	1639 1829	1047 1237	1064 1384	1386 1814	1089 1471	1028 1834

Sources: Census, 1881, Vol II; Census, 1901, Vol A, part II; Census, 1911, Vol V, part III; Census, 1921, Vol VII; Census, 1931, Vol III, part II.

Table 9.2

Agricultural Labour Force in North Bihar in relation to total Agricultural Labour (Percentage)

	Male				
	1901	1911	1921	1931	
Patna Division					
Patna	26.9	28.4	24.9	27.3	
Gaya	32.5	25.6	25.0	29.9	
Shahabad	23.8	36.3	21.2	27.9	
Tirhut Division					
Saran	8.7	9.1	5.9	8.8	
Champaran	23.5	24.1	19.3	22.4	
Muzassarpur	21.5	24.9	22.3	31.1	
Darbhanga	22.1	29.8	24.7	29.4	
Bhagalpur Division					
Monghyr	27.0	32.9	29.2	30.7	
Bhagalpur	25.9	34.7	29.7	35.4	
Purnea	27.4	35.1	25.1	39.4	
North Bihar	23.3	27.2	22.4	28.0	
Bihar (including Chota Nagpur Estate)	10.4	27.0	20.2	25.0	

Note : We have excluded in the table the 1881 figure because of certain

difficulties in comparison .See text for this.

Sources: As in table 1

- (1) The proportion of agricultural labour has surely gone up between 1901 and 1931. This is evident from the two table (Table 9.1, and 9.2).
- (2) The actual growth of agricultural labour in thousands, both male and female, shows similar trend: their number increases in North Bihar as well as in the whole of Bihar (Table 9.1).
- (3) The percentage of male agricultural labour force tototal agricultural labour in North Bihar also shows rise (Table 9.2). The rising trend is more pronounced when we take the region of North Bihar and the province of Bihar as a whole (Table 9.2).
- (4) In terms of region the district of Patna, Shahabad and Saran show fall in both male and female agricultural labour population (Table 9.1). The other districts of North Bihar shows rise in both male and female. As a percentage to total agricultural labour force, however, the male agricultural labour rises in all the districts between 1901 to 1931, except in Gaya and Champaran (Table 9.2).

Whether this growth of agricultural labour indicates increasing differentiation of the peasanty of North Bihar and rise of capitalist relation in agriculture can not, however, be deduced from the information though it probably adduce to increasing landlessness and pauperisation.

9.3 Caste and social origin of the casual labour

Dharma Kumar tried to study the extent of growth of this new class of agricultural labour by using caste-occupation relationship. She, however, confused caste relation with class which are two district distinct categories. It should be noted that this confusion affected the census also. The collection of material on caste by the census superintendent was at the urgings of the British colonial state which wanted to grasp this specific feature of social relationship in India. In their attempt, however, they overlooked the most important aspect of the structure of caste relationship in the indian society — their evolutionary character — and interpreted it in rigid terms. The caste data in the census did not remain unaffected by this retrogative effect (Bandopadhyay, 1985).

Variations of castes of North Bihar and their occupation have been presented in the Table 9.3.

Table 9.3

Social Origin of Agricultural Labour (Actual Worker: Percent)

	Agric	cultural La	abour	Uns	Unspecified Labour		
Item	1901	1911	1921	1901	1911	1921	
				Male			
Landowning Caste	2.6	1.7	.63	1.1	1.3	1.5	
Cultivating Caste	4.8	14.1	9.1	1.7	1.3	5.0	
Artisanal Caste	9.1	25.1	16.8	8.3	2.2	2.2	
Labouring Caste	21.8	4.5	6.35	4.7	1.5	1.5	
			F	<u>`emale</u>			
Landowning Caste	4.7	7.2	2.7	1.1	3.4	2.7	
Cultivating Caste	8.5	25.8	29.0	3.1	1.9	27.3	
Agricultural Caste	11.3	44.8	28.7	10.0	2.9	16.8	
Labouring Caste	28.6	3.9	8.5	4.5	2.8	1.7	

Note: See text for explanation of the items.

Source: Census tables on caste and occupation from relevant census.

Table 9.3 suffers from certain serious limitations: First, the data is by no means exhaustive. It cannot be compared with the three census tables quoted earlier. Second, the decennial comparison of growth of agricultural labours and unspecified labours is also not possible as the coverage of castes in the census operation from one decade to another has varied significantly. The coverage, in fact, has become increasingly less.²³

Third, the social attitude of the informants towards castes and their rigidities also seriously undermined the effectiveness of these information on caste and occupation. Thus if the informant was an upper caste Brahmin and if he was not a landlord, he would invariably record priesthood as his principal occupation. If he was, on the other land, a landlord, he would invariably record cultivation as his principal occupation and

^{23.} The coverage is not uniform: In 1901, the landowning caste includes 5 castes; the cultivating caste, 9; the artisanal caste, 19 and the labouring caste, 7, in 1911 and 1921 the coverage is more or less the same. In 1911 the landowning caste includes 5 castes; the cultivating caste, 11; the artisanal caste, 18, and the labouring castes, 5. In 1921 the corresponding number of castes are 4, 5, 10 and 2, and in 1931 only the landowning castes and artisanal castes were covered in the census. In 1931 the number of castes covered in landowning caste is 2 and the artisanal caste, 2.

priesthood as his secondary occupation. A cultivating <u>Mallah</u> would assert in the census that he was a boatman and a <u>Koiri</u> landless agricultural labourer would say cultivation as his profession.²⁴

Only a few comments can be made out of these observations: First, a not insignificant proportion of the cultivating, artisanal and labouring castes joined the ranks of agricultural and other unspecified labour (Table 9.3). Second, this tendency was less marked for the female population, which could of course be for reasons of inaccurate census enumeration. Third, the tendency toward 'depeasantisation' could be observed even in case of the landowning castes. The 1931 Census Report on Bihar indicated this tendency among the upper castes like <u>Brahman</u> and <u>Kayastha</u> of Bihar as the following Table 9.4 shows:

Table 9.4
Upper Caste in Manual Work (Nos.)

	Bra	Brahman		Kayastha	
	1921	1931	1921	1931	
1. Farm Labour, Wood Cutter etc.	4,470	16,166	716	1749	
2. Labourers	1,312	2,077	13	119	
3. Artisans etc.	3,024	3,204	367	410	
4. Labour, Boat men etc.	899	1,714	105	127	
5. Unspecified Labour	3,793	3,820	318	749	

Source: Census 1931, Vol. VII, Part I, p. 192.

This tendency towards 'depeasantisation' and also 'pauperisation' is certainly more marked among the artisanal and labouring castes. This was best evident at the time of the natural crisis like draught or famine. The Famine Reports were replete with observations that the landless classes were the first category of people to migrate and/or flock at the relief camps at the slightest hint of the imminent famine. The Table 9.5 prepared from various famine reports well illustrate this point:

^{24.} This observation of the census commissioner was quoted in Report on the <u>Survey and Settlement of Muzaffarpur District</u>, 1892-1899,1961; p.25.

Table 9.5
Social Origin of Artisans and Labourers
Affected by Famine

Year of Famine/	District	Castes Affected				
Famine Report		Cultivating Caste	Artisanal Caste	Labouring Caste		
1866	Tirhut	Ahir, Kurmi	Nunia, Dom	Dosadh		
1988	N.A. Bhagalpur Muzaffarpur	— Dhanuk Kahar	Lohar, Bania Jolaha Nunia, Jolaha	— Musahar Musahar		
1896-97	Darbhanga Shahabad	Ahir	Chamar Chamar	Musahar Dosadh Kharwar Dhanggar		
1898	Saran Shahabad		Chamar, Jolaha Jolaha, Lohar, Napit, Hajjam, Mochi.	Dosadh		

Note

: In cases where the famine year is not specifically given in the report, we

have given the year of the famine report.

Source: Relevent famine reports on Bihar.

Table 9.5 shows that the crisis like famine identifies more clearly the agricultural labour class and their castes. The dominant among them are the artisans who were dispossessed of their caste jobs and also the tribes and lower castes who are traditionally landless.

A few micro level observations also concur to this trend of 'depeasantisation'. In 1873-74 the Patna Commissioner reported that Rajwar and Musahar are the two poorest castes in the Bihar and their only occupation were watchmen. The Kharwar tribes of Shahabad lost their land to non-tribal and joined the roving band of landless agricultural labour (C. S. B; 1879: 348-72). In his report on Gaya in 1886, Stevenson-Moore pointed out that the landless agricultural labourers in the district of Gaya were mostly Kahar, Chamar, Dusadh, Musahar and Rajwar, Grierson talked in the same manner in an earlier report on the same district (Grierson, 1893: 110-114). In Kajah Musahri village the Bhagalpur Commission found that the landless labourer were either Musahar or Mochi, (the cobler) or

^{25.} Selections from Divisional and District Annual Administration Report: 1872-73, (1874: 324).

^{26.} Stevenson Moore, Report on the Material Condition of Small Agriculturists and Labourer in Gaya, Calcutta; p.29.

<u>Lohar</u>.²⁷ In village Paharpur in Bhagalpur district, the colleter recorded that the landless labourer were mostly low castes.²⁸ In 1893-98, the study of 40 Narhan estate villages showed that the pure labouring classes were <u>Kahar</u> (bearer), <u>Musahar</u> and <u>Khatbwe</u>.²⁹

The conclusions of this section are, therefore, this: First, the class of agricultural labour clearly increased over 50 years from 1881. The biases in the census data, however, prevents any definitive observation about the magnitude of their growth. The attempt to look into question from the caste/occupation did not reveal anything more substantial except (1) that the agricultural labourers were mostly drawn from lower castes, artisanal castes and tribals; and (2) that signs of slow differentiation was also evident and it affected even the upper castes.

9.4 Wages of the casual labour

Like the information on the agricultural labour population the data on their wages is also incomplete. Chaudhuri fairely accurately sums up the nature of wage data: It is scanty, he says, uncomparable and not related to identical region (Chaudhuri, 1984: 169). It is due to the nature of the labour market in rural society; it remained localised and fragmented. The variety in wages, mode of payment, timing and factors going into their determination cannot be encapsuled into a simplified rates as in case of the industrial wage. The one other contributing factor to this was the absense of the data collecting agencies. The agricultural wage data was collected only when the natural calamities like famine and flood necessitated such collection along with other poorer classes and even in that case the primary purpose was to compare the wages of agricultural labour with other poorer classes. The usual comment that one often come accross in these studies on agricultural labour and their condition was that the condition of the former was better than the depressed peasantry. The colonial state was more interested in rent, and cultivators than the condition of the labouring classes.

^{27.} Letter dated 2 May, 1888, from J. Beames, Commissioner of Bhagalpur, to the Secetary to the Government of Bengal, Revenue Department, in P. Nolan, <u>Enquiry into the condition of the poorer classes</u>; (1888.)

^{28.} Latter dated 24 April 1888, from B. Naraian, Assistant Settlement Officer, Raj Banaili and Srinagar Estate to the collector of Bhagalpur.

^{29.} Final Report on the Survey and Settlement of the Narhan Ward Estate (Monghyr District); p. 25.

^{30.} For an example of this general trend, See, P. Nolan, <u>Enquiry into the conditions of poorer classes</u>, Revenue Department (Agriculture), July 1888. Even Grierson spent less than five pages on labour in his <u>Notes on the District of Gava</u> with the comment that their condition is nearly same as that of the cultivators (Grierson 1893).

Sources of time series data on agricultural wages in Bihar are basically three:

(1) Prices and Wages in India; (2) Datta Committee Report and (3) the Census on Wages. Besides, there are reports, notes, travellogue of private individuals and government officials. While these individuals reports have often gone into a fair details of various aspects of agricultural wages, their usefulness are limited to regions and in time.

The <u>Prices and Wages in India</u> gives data on wages of able-bodied agricultural labour for Patna, Muzaffarpur, Monghyr and Purnea from 1873.³¹ The <u>Prices and Wages</u> data presented many problems:³² (1) The reporting agencies were untrained; they tended to gloss over varying conditions of agricultural wage employment (2) The agricultural labourers were usually paid in kind, either the entire amount or a part of it, especially the 'supplement' part like breakfast etc. They were extremely varying. The <u>Prices and Wages</u> ignored all these. (3) The <u>Price and Wage</u> data also failed to take note of varying conditions of agricultural employment. It took the easiest recourse of presenting the cash wages of the neighbourhood towns and urban centres as representatives of rural wages. It also failed to include 'supplement' an important component rural labour wages, in their calculation of agricultural wages.

The Datta Committee³³ did not do any the better. Though it criticised the <u>Prices and Wages</u> data for its inadequate coverage and inexactness, it too contained all those drawbacks. Its coverage was inadequate. Further it dealt with only free agricultural labour. It excluded <u>Kamias</u> from its counting who, in Bihar at least, constituted an important segment of agricultural labour forces.

The third sources of wage data, i.e. the census, is wholly inadequate. In Bihar, the census was held only on 1911 and 1916. But the figures were again scanty and inadequate and not comprehensive enough which made any precise comparison of this data with other sources difficult and any comment on that basis hazardous.

^{31.} The <u>Prices and Wages of India</u> began publication from 1884, but gave data from 1873. The indifference of the colonial administrator about the agricultural labourer as a separate class entity is well-matched by the ignorance of some of the recent histeriographer on the data sources of agricultural labour during the colonial period. For this see Arun Ghosh, et al. in <u>Social Scientist</u>, (1984.)

^{32. &}lt;u>Prices and Wages in India</u>, 13th issue, Calcutta, 1913. We have not been able to see O'Conor's comment in the 1886 volume of <u>Prices and Wage</u>.

^{33.} See chapter III and Appendix G in K.L. Datta, Report on the Enquiry into the Rise of Prices in India, Calcutta, (1914)

The other sources of wage data, as mentioned earlier, are individual and official surveys, reports and documents. We begin with these first. We have presented two sets of table from such sources: First set comprise of the wages of daily agricultural labour (Table 9.7, 9.8, 9.9, 9.10, 9.11 and 9.12). It gives data on different point of time beginning from the days of Buchanan (1808-1812) to 1948. It also gives regionwise information for these periods. (2) The other set of data is the operationwise data prepared from the information fragments given in above sources (Table 9.13 to 9.15).

The year, and area covered in these sources are presented in the tabular form below (Table 9.6):

Table 9.6
Sources of wage data

	Year covered in the sources	Data Source (Short title)	District covered
1.	1808-1812	Buchanan	Patna, Gaya, Shahabad, Purnea Bhagalpur.
2.	1874-1881	Selections from Division : Bhagalpur, Purnea, Monghyr.	Patna, Muzaffarpur, Champaran,
3.	1888	Enquiry Into the conditions of poorer classes	Patna, Muzaffarpur, Champaran Bhagalpur, Purnea and Monghyr.
4.	1892	Memorandum on the Material Condition	Patna, Monghyr, Bhagalpur Purnea.
5.	1887-1913	Settlement and Famine Reports	Darbhanga, Muzaffarpur, Champaran Monghyr, Purnea or Bhagalpur.
6.	1938-1948	Indian Journal of Agricultural Economics.	Bihar

The sources are scattered both areawise and timewise and likely to contain unknown baises. The individual reports were affected by individual inclinations though a few of them are quite authoritative and detailed; e.g. Buchanan's diary and Grierson's note.³⁴ Subject to this, the following indicative observations can be made about various aspects of agricultural wages in North Bihar on the basis of the Tables 9.7 to 9.15.

First, the wages of the men agricultural labourers were higher than that of the women; and the wages of the later was higher than that of the boys. This was an universal feature (Table 9.8, 9.10, 9.11 and 9.12). Only exception was the Patna - Bihar region in the early nineteeth century for which we had reports by Buchnanan (Table 9.7).

^{34.} See in this connection Bagchi's comment on Buchnanan in Bagchi (1976).

Grierson argued that this was because the women, at least in Gaya district, did lighter work like weeding, etc than the men (Grierson, 1883).

Second, the wages were paid mostly in grain, usually in coarse grain like Khesari, Makai, Kodo etc. and occasionally in unhusked paddy. This again was a universal feature throughout the period of our study as evident in all the tables. O'Malley, Hunter and Buchanan earlier reported the same thing. In some areas of Bhagalpur district, it was the practice to pay the wages of weeding operation in dhan (unhusked paddy). Only at the time of harvest the agricultural labourer got his wages in the crop that he cut. The Kamias (bonded labour) did not even get that. He always got wages in coarse, inferior grain . Grierson in fact, made this type of grain payment the distinguishing feature of the Kamias (Grierson, 1883).

Third, sometimes the 'supplements' formed a separate component of daily wages. The 'supplements' were invariably paid in kind and the quantity and grain paid varied extremely. It could be meal or breakfast. For example in some of the villages of Bhagalpur district in 1880 the labourer were given meal (Table 9.8). In the interior of Saran in the 1880 they were given only 1/4 sers of grain or even peas as breakfast (Table 9.9). In Champaran district between 1887-1913 they got only 1 2/3 Chatak grain as breakfast, and in Muzaffarpur district only 2 Chatak makai as meal (Table 9.11). Buchanan's report also gave similar variations in the quantity, nature and crop given in the 'supplement' (Table 9.13): It was given either as Sattu (pasted grain), or as roti (cake) or just in the form of grain. And it was always paltry - 1 to 2 Chatak in weight.

Fourth, in some case the wages were paid on time rate basis; e.g. in ploughing, transplanting, weeding, etc. But in some other place the wages were paid at piece rate i.e. certain proportion of the crop cut. Often the wages were paid in instalments. In the Bhagalpur district, for example, a part of the wages were paid in the field during the work and a part at the day end (Table 9.8).

Fifth, the wage rates differed extremely from region to region. It differed from one season to another not only in amount but also in forms, i.e. cash or kind, depending on the nature of agricultural operation at that moment and the local conventions. For example in Shahabad between 1874 and 1881 though the general rate was 4 ans, the rate in the month of Katik (October-November) was 6 ans - 8 pies; in Jeth to Asad

(May to July) it was in kind of 1 ser grain; in Sawan to Bhado (July to September); 1.5 ser grain in Aswin (September - October) and 1.9 ser (Table 9.14).

Sixth. The rates in the interior village were less than that of the areas near urban centres (Table 9.9 and 9.14).

Seventh, the wages of outside labour could be different from that of the village servants (Table 9.12 and Table 9.15). For example, it was found that in the Tekari estate in the Gaya district the outside labour used to get 1 out of 12 to 21 bundles at the time of harvesting and occasionally some extra bundles, but the village servant got at the rate of 1 out of 11 to 16 bundles (Table 9.15) and was given nothing else.

Eight, the wage rates also depended on the class of employers and also employees. For example, it was found that in Monghyr in 1910s the harvest wage rate was 1/14 bundles if the labourer was a village tenant; it was 1/18 bundles if the labourer was an under-ryot; the rates was 1/12 bundles if the labourers was outsider or a ploughmen (Table 9.15). The under-ryots were thus discriminated against. The dominant landlordemployer could often force the labourer to work at rates lower than the market. The smaller landowner, on the other hand, could get labourer only at going wage rate.35

Forms of payment also differed considerably. Near the urban areas the cash wages were more frequent. Buchanan reported that in Patna the labourers were often paid in cash (Table 9.7 and 9.9). The cash payment became more frequent in the twentieth century (see Table 9.11, 9.12, 9.13 and 9.15).36

Table 9.7 Wages of Agricultural Labourer (Daily) (North Bihar in early nineteenth century)

Region	District	Men	Women
Bihar and Patna	Patna	3-4 pies, or 4.5-6 sers coarse grain daily.	3-4 pies, or 4.5-6 sers coarse grain daily.
	Other	6 pies or 9 sers coarse grain daily.	6 pies or 9 sers coarse grain daily
Shahabad		2.5 sers daily.	N.A.
Bhagalpur		3 sers grain or,9 pies - 1 ans daily.	N.A.

Montgomery Martin, The History, Antiquities and Statistics of Eastern India, relevant Source: volumes.

^{35.} See in this connection, the evidence given by A. Sinha, Pleader, General Secretary, Bihar Provincial Kisan Sabha, Muzaffarpur, in Royal Commission on Agriculture in India, Vol. XIII; p. 268. The smaller landowner usually employed labourer who had land in the village. He often also had to give labourer

^{36.} Iin the table the kind payment has often been converted to cash for convenience of presentation.

The kind wage was fixed more by tradition and, therefore, locally flexible, but tends to be sticky over time. The labourers usually prefered payment in kind as it protected them from the effect of price rise. In the period of price rise the cultivators often preferred to commute kind into cash wages. In late nineteenth and twentieth century Bihar they often tried to do that leading to social frictions. Though not much should be made out of this shift to cash wages, it certainly meant the penetration of market in the labour market relation and showed the strength and position of the employer classes.

Thus from out of this disparate group of data one can make a few observations about the wage structure in North Bihar. (1) The wages were paid mostly in kind. The 'supplement' were paid almost always in kind. 2) The wages were calculated on the basis of time, except in case of wages of harvest in which case the basis was piece rate. (3) The wages varied between regions, districts, rural and urban areas, between gender, age, operation and season. (4) In the twentieth century there had been an increaseing tendency to pay wages in cash. It reflected the effect of market penetration. In actual reality of North Bihar labour market during the period, it also reflected the cultivators response to prices: the later tended to commute kind wages to cash and vice versa according as the prices increased and decreased.

In 1870, the Deputy Collector of Shahabad wrote that the condition of agricultural labourer in Bihar was worse than that in Bengal. He did not get more than 2 ans daily; his food was less varied; his furniture was cheaper and fewer; and his dwelling places less comfortable.³⁷ In 1879 one commentator wrote that the labourer prefered few bundles of grain to a few pies of money wages. If they could keep their body and soal togather by eating the coarsest bread and water with that pittance they were normally happy.³⁸ In 1881, it was said that the labourers prefered kind wages to money wages. It protected them from the effect of prices. When out of work in the off season, they lived by eating wild produce such as roots, grasses and wild fruits and seeds.³⁹

^{39.} Calcutta Review, (1879:150).

^{37.} M,S,O,H. Ahmed, Deputy Collector of Shahabad, Report on the Agricultural Statistics of Shahabad, 1873-74.(1874); p.16.

^{38.} East India (Report of Famine Condition), Appendix I, Miscellaneous Papers bearing on the conditions of the country and the people of India,(1881);p.166.

(Daily Rates)

	District	Wages	Others
1.	Muzaffarpur (Pargana Bassarah, Chakla Nye)	lans or 1.5 anas	With or without food.
2.	a) Bhagalpurb) Pargana Duphar;	4 sers course grain (e.g. millet) or 2.5 sersrice (partpaid in the field; part at the end of the day. Cash payment rare). I. 5 Kachcha or 4 pukka ser un-hus-	
	(village: Sitapur and Raghunathpur)	ked; i.e., 3 ser husked rice II. a) 2 ser husked rice b) 1 ans 6 pics	meal No meal
3.	Purnea (village: Kajah Musahari)	 a) Men: 3 sers grain or 2 ans. b) Women: 1.5 ans 6 pies or 2.5 sers c) Boy (above 12): 1 ans or 2 sers grain. 	
4.	Bhagalpur (village : Paharpore and Asai)	 I. 1/2 paseri or 4.5 <u>kachcha</u> or 2.5 ser <u>pucca</u> ser <u>Marua</u> (inferior grain) or Paddy. 	
		II. 3 sers grain (Paid part in work; part at the day end)	Meal
5.	Monghyr (village: I. Indruk; II. Mohanpur)	I. 2 ans II. 2 sers or 2 ans	
6.	Hazaribagh (6 villages)	a) Men: 3 sers grain or 1.5 ansb) Women: 2 sers grain or 1 ansc) Child: 1.5 to 2 sers grain.	
7.	a) Patna	Men: 2 to 2.5 ser coarse grain i.e., lans 4 pies. Women: 1 to 1.25 sers coarse grain.	Food occassionally.
	b) Bihar subdivision.	2 ans.	
8.	Muzalfarpur	I 4 to 5 sers un-husked rice. i.e., 3 to 3.75 sers husked rice.	2 'roti' or cake of 1/2 sers barley or makai.
		II 4 sers <u>dhan</u> (paddy) or 5 sers. Makai (Indian Corn) (Earlier there used to be no supplement).	
		III 2 ans (Earlier rate: 4 pies or lanas).	
9.	Champaran	 a) Men: 2 anas; i.e.; 3 sers grain. b) Women: 1 anas 6 pies or 2.5 sers. c) Boy (above 12): 1 ans or 2 sers grain. 	
10.	North Bihar	.5 <u>pies</u> or 1.16 ans.	
11.	South Bihar	.24 <u>pies</u> or 1.08 ans.	

: 1. Seldom wages are paid in cash. We have shown rates in cash for more systematics Note presentation.

- Pice = 1/4 of an ana. Pies = 1/12 on an ana.
 I,II,etc means different types of rent in the same area.

Source: 1. Final Report on the Settlement Operation in Chakla Nye, Pargana Bissarah, District Muzaffarpur, Muzaffarpur, 1887.

2. Enquiry into the Condition of Lower classes of Population in the Lower Provinces of Bengal, (1888).

Table 9.9 Wages of Agricultural Labourer in North Bihar (1874-1881)

(Daily rates)

	District		Area	a	Wages	Supplement		
1.	Ga	ya	I.	Not specified	2 to 3 sers coarse grain or 1.25 ans daily.			
			II.	Sone canal area	2 to 4 sers coarse grain daily.			
2.	a)	Shahabad		Before Sone canal				
				rate Current rate	2 ans daily Do			
	b)	Pargana Rohtas	I.	Skilled labour Unskilled labour	2 ans daily Do			
	c)	Pargana Chynpore		Skilled labour Unskilled labour	Do Do			
	d)	Pargana Sasaram		Skilled labour Unskilled labour	Do Do			
	e)	Pargana Bhojpur/ Chausa		Skilled labour Unskilled labour	Do Do			
	f)	Pargana Barahgaon		Skilled labour Unskilled labour	Do Do			
3.	a)	Pargana Arrah		Skilled labour Unskilled labour	Do Do			
	b)	Pargana Behea		Skilled labour Unskilled labour	Do Do			
4.	Sa	ran	Inte	lar [fasil erior trict	2 ans daily 1.5 daily 3 to 4 sers grain daily.	.5 sers grain or peas daily.		
5.	Tir	hut	Suc Mal	rrent Rate Idar Station Iasil Rate erior Rate	I. 1.5 ans dailyII Do2 anas daily1.5 daily3 to 4 ser grain daily.			
6.	Ch	amparan		erior triet	.25 to .19 anas daily.			

'<u>Pice</u> and <u>Pies</u> converted to standard ans at the rate of:
a) <u>Pice</u>=1/4 of an ana Notes:

b) Pies = 1/12

Source: 1. Selections from Divisional and District Annual Administrative Report: 1872-73; Bengal (1874)

2. Report on the Agricultural Statistics of Shahabad (1873-74)(1874)

Table 9.10

Wages of Agricultural Labourer in North Bihar (1874-1892)

(Daily rates)

1.	Patna	a) b) c)	Men Women Child	:	2 to 2.5 sers coarse grain
2.	Monghyr		Men	:	Rs. 4 per month or 2.1 ans daily.
3.	Purnea		Men	:	Rs. 3 to Rs. 4 per month i.e1.25 ans to 2 ans daily.
4.	Bhagalpur		Men Women	:	2.5 sers or Rs. 4 per month or 2 corn per day. Same rate.
5.	North Bihar		Men Women Child	:	2 ans 1.25 ans 1 ans.
6.	Hazaribagh		Men Women Child	-	1.25 ans or 3 sers coarse grain 1 ans or 2 sers coarse grain75 pies or 1.5 sers coarse grain.

Source: Memorandum on the Material Condition of the Lower Provinces of Bengal; India Office Library, File No. L/Part/2/220.

Wages of Agricultural Labourer in North Bihar (1887-1913)

(Daily rates)

	District	Wages	Supplement		
1.	Darbhanga	Men: 5 <u>kuchcha</u> ser coarse grain or <u>jaws</u> Women and Boys: 3 sers coarse grain 1.30 ans daily			
2.	a) Muzaffarpur	4 <u>kuchcha</u> or 2.5 pucca sers coarse grain	Meal : '2 chatak <u>Makai</u> or .13 sers (Indian Corn)		
	b) Hajipur (Dist. Muzaffarpur)	1.25 to 2 ans daily			
	c) Mahua thana (Dist. Muzaffarpur)	 I. a) 1 ans daily b) breakfast: 25 ans daily II. a) 1.25 b) No breakfast. 			
3.	Champaran	I. a) 1.5 ansII. 2.75 ser <u>pucca</u> maizeIII. 3.1 ser <u>pucca</u> millet.	Breakfast: 1 2/3 chatak grain daily.		
4.	Purnea: a) Pargana Tarakhardah/ Surajgar	1.5 ans to 2 ans daily			
	b) Pargana Tajpur	2 ans to 2.5 ans			
5.	Narhan	a) 1.75 ser grain or 1.5 ans			
	Estate	b) One meal.			
6.	Banaili 1887- Estate 1894	도 등 일반 기업을 하고 하였다. 마이크로 마르크로 보였다. 클립트 등 보고 있는 것들은 사람들은 그 사람들이 있는 것을 받았다. 그리고 있으로 있는 것을 보고 있다. 그리고 있는 것을 받았다.			
	a) Pargana Dhapar	5 <u>kuchcha</u> or 4 <u>pucca</u> ser of unhusked rice or coarse grain daily or 1.5 ans.			
	b) Pargana Khubkhand	 I. 4.5 sers kuchcha or 3.75 sers pucca coarse grain II. 3 sers kuchcha coarse grain. 	Meal		

Notes: 1. Women get less than men usually

 Grains are inferior crops like marua, khesari etc.
 Pies and Pice have been converted at the rate of a) Pies = 1/12 of an ana b) Pice = 1/4 of an ana.

Source: 1. Relevant Settlement Reports.

2. Appendix to the Report of the Indian Famine Commission, 1898, Evidence Vol.; Vol. I, Bengal.

Table 9.12

Wages of Agricultural Labourer (Daily) in North Bihar (1939 and 1948)

		Agricultu Labour (d		Ploughing		Reaping	
1.	North Bihar :						
	1939	Men : Women :	3 ans daily 2.5 ans daily	Nil		1/10 bundle to 1/16 bundle daily	
	1948	Men : Women :	Rs.1.5 ans daily .75 ans daily.		3 sers paddy or and <u>Khesari</u> .	Same	
2.	South Bihar:						
	1939	Men : Women :	4 ans daily 3 ans daily	Nil		N.A.	
	1948	Men : Women :	Rs.1 ans 8 daily .75 ans daily		4 sers paddy or and <u>Khesari</u> .	N.A.	
3.	Other District:						
	1939	Men : Women :	N.A. N.A.	N.A.	Outside Labour : Village Labour/ Servants:	1/21 bundle 1/16 bundle	
	1948	Men : Women :	Rs. 1 daily .75 ans daily.	N.A.		N.A.	

Note: 1. For threshing: 100 'anti' (bunch) per 1000 anti threshed. It is specially in 'diara' areas of Patna, Saran etc.

Source: Indian Journal of Agricultural Economics, Vol. III, No.1, April, 1948.

 Table 9.13

 Operationwise Wages of Agricultural Labour in North Bihar (early nineteenth century)

								(per da)
				Bihar and Patna		detrockendunts de excustement propriet en men arte conscienter etter frei die frei dals de la principal de la d	Purnea	
			Wages	Supple- Wages ment	Supple- ment	Wages Supple- ment	ole- Wages t	Supple- ment
ï	1. Ploughing	1. Azimabad 2 pies	2 pies	.5 ser -	1	2 pies .5 pies	les 2 pies	ė.
		2. Not specified	13 ser grain					
		3. Do	1.5 -2 pies	.5 ser				
				sattu'				•
	: (4. Nawaua	o ser grain	.5 Ser -				
2	2. Weeding			- Things	- Middle	1	1 pies	1.7 chatak
Б	3. Watering	1. Azimabad	3 pies	T do	East		· •	grain.
	0			'sattu'				
		2. Nawada	3 ser	.5 ser	1			
				<u>'sattu'</u>				
;	ı ranspian- ting					6 pies or		
5. I	Harvesting	1. Azimabad	6.5 ser			5.5 un hus-		
			grain			ked paddy		
		2. Nawada	1/21 bun-	'Ati':6 sers -	- 2.	.5 ans per		
			le or 10 ser	Lara: 17.5		month or		
				sers		or 1.7 ser daily		
		3. Not	1/21 bun-	'Att' and -	က်	undle		Khari/
		Specialica	į.	<u></u>	4. Dam-	clothes: 3 sers 2 pies	es: grain s	<u>Lara</u>
					daha	grain		
	6. Threshing	1. Patna	1/13 sers					
		2 Gava	1/19 1 'do'					
ان	7. Cleaning	1. Azimabad	1 ser grain	.5 ser				
)			sattu				
							AND ADDRESS OF THE PROPERTY OF	And the Party an

Operationwise Wages of Agricultural Labour in North Bihar (early nineteenth century)

		Chohohod		Bhagalpur	
		Snanabau Wages Supplement		Wages	Supplement
1. Ploughing				3 sers of husked rice or coarse grain	 Loan: Rs.5, Rs. 20 extra allowance to other work.
Harvesting: (By Daily Labour)	_	3.5 sers of crops - crops per 1 mds -	Western Part	1/16 to 1/20 bundle (8 to 11 percent of produce)	
	Ħ	6 ser unhusked rice or 4.5 ser			
(By Servants)	.	4.75 ser grain	Eastern part (by annual Servant)	1/6 bundle	
	н'n	10.5 sers grain 1/21 to 1/21 bundle			
Harvesting by Ploughmen		6 sers un-hus- Lorhur : upto 5 per ked rice or 4.5 cent of produce husked rice	per		
The second secon	The latest designation of the latest designa				

For replacement of ploughmen, the rate is 3 pan of cowries or 3 sers grain per day. Note

Rates of Ploughmen given by Buchanan refer to Kamia. We have used this for ploughmen in general. There is little difference in wages

of ploughmen and Kamia except in the condition of employment.

Reaping is done by both daily labour and annual servants. The crop is then carried to threshing floor. The man who gets higher rates in reaping also does the threshing. ო

(a) 'Sattu', or 'Sattoo' = parched grain.

(c) 'Att' = a handful of stalk of any grain. It is also known as Lorhu, Lara, Pangia and Uridaki and the quantity vary from 1/4 percent

(d) $16 \frac{chattak}{chattak} = 1$ ser. In case of "supplement" in this table, the rates have been presented in chattak due to difficulty of conversion. Source: Montgomery Martin, The History Antiquities and Statistics of Eastern India, Cosmo Publication, Delhi, 1976; relevant volumes.

Table 9.14

North Bihar (Operationwise) :1874-1881 Wages of Agricultural Labour in

(Dally Rate)

ď									
Champaran							1.25 ans 1.25 ans	1.25 ans 1 ans.	.76 ans
ıut							Sadar: 1.25 ans Mufassil: 1 ans	<u>Sadar</u> : 1.25 ans Mofassil: 1 ans	Sadar: .76 ans Mufassil: .71 ans
Tirhut		Land	1 bigha (.6 acre)				I. II.	I.	I.
		Aswan	1.9 ser pucca					1.5 ans	1.25 ans
Shahabad		Sawan Bhado	1.5 ser pucca						
Sha		Jeth Asad	1 ser pucca					1.5 ans	l ana
	Others	Kartik	6.5 ans.						
	General	ם פוני	4 ans.	4 ans.	1 <u>bojha</u> sheaf.	1/21 maunds			
			1. Sowing	2. Weeding	3. Reaping	4. Threshing	5. Woman	6. Boys	7. Child

1. In North Bihar reapers share works out to be 10 percent of the produce. Note

2. Plough Driver in Champaran gets 2 ser coarse grain daily. 3. $\overline{\text{Pice}} = 1/4$ of an ans $\overline{\text{Pies}} = 1/12$ of an ana.

Source: 1. Selections from Divisional and District Annual Administrative Report: 1872-73; 1874.
2. Report on the Agricultural Statistics of Shahabad, 1873-74; 1874.

Agricultural Wages in North Bihar - Operationwise (1887-1913) **Table 9.15**

	Muz	Muzaffarpur	Gaya District	istrict	Saran District	trict	Darbhanga	Banaili	South	Shahabad
	Wage	Supple-	Wage	ge	Wage	Supple-)	Estate	Monghyr	
1. Ploughing	2 ans (1/2 day)	2 ans .5 ser kachcha, (1/2 day) or .3 ser pucca coarse grain.			3 ans to 1.5 ans daily (1 ans for	1/2 ser 'sattu'				2.5 ans daily
2. Digging	2 ans meal (creance rice and Total: 2 ans daily)	meal (coarse rice and pulses)			3 local ser daily	1 ser daily				
3. Transplanting		•			1.5 ans daily			•		3.25 ans daily (part in cash, part in kind)
4. Planting of Sugar Cane	1.5 ans	some food						••• · · · · · · · · · · · · · · · · · ·		2.5 ans daily
5. Weeding	1/16 bundles				1.5 ans daily		1.5 ans daily	•		
6. Reaping			Outside labour Village scrvants	1/21 bundles 1/16 bundle 4	1/16 to 1/20 bundles daily		I. 1/8 bundles daily [for Harwa] II. 1/12 Do III. Lab: 1/12 bundles daily	1/16 bundles daily	I. Ten: 1/14 bundles daily II. Under Ten: 1/18 bundles	1/21 bundles daily
7. Threshing 8. Plough Hiring							2.5 ans daily	I. 1 ans daily per bullack pair II. 2 ans daily		4 sers daily
9. Irrigation					1.5 ans daily		1.5 ans daily			

: 1. Woman gets less than man usally. Notes

Grains are usually Marua, Khesari and similar other inferior crops.

a) $\underline{Pies} = 1/12$ th of an ana. b) $\underline{Pice} = 1/4$ th of an ana

Sometimes 6 sers daily as supplement.

Supple- refer to 'Supplement.

Source

1. Relevent Settlement Reports.
2. Appendix to the Report of the Indian Famine Commission, 1898, Evidence Volume; Vol. I; Bengal

Even as late as 1945 one of the respondents to the Famine Commission questionnaire talked almost in the same vein about the agricultural labourers of Bihar. The official reports expressed concern about the fact that the agricultural labourers carried a huge load of parasites on their back.⁴⁰ They were unorganised, belonged to the depressed classes and were in no position to get fair wages. He was doomed to the life of destitute for ever.⁴¹

Two sets of information are presented below in support of these observations about the trend of wage income of the agricultural labourers and their economic condition. The first set of data has been given in Table 9.16 which gives the composite wage data for three divisions of Patna, Tirhut and Bhagalpur and also North Bihar. In Table 9.17 we have given operationwise information on agricultural labour togather with the wage data of the village and urban artisans.

Table 9.16 gives the quinquennial wages from the wage census. It showed that the money wages (ans per day) had risen or remained constant in the five years between 1911 and 1916, for agricultural labour, ploughman and village artisans and that for all the three divisions in North Bihar, except in case of ploughmen in Bhagalpur division and blacksmiths in Patna divisions in which cases the wage rates declined (Table 9.16).

Table 9.16

Quinquennial Wages rates of Agricultural Labour in Bihar (Ana Per Day)

	Agricultura	al Labour	Ploug	hmen	Carpe	enter	Black	smith
	1911	1916	1911	1916	1911	1916	1911	1916
1. Patna Division	2.7	3.4	2.5	2.06	4.0	4.9	5.3	4.7
2. Tirhut Division	2.25	3.1	2.06	2.06	4.1	4.9	4.2	4.9
3. Bhagalpur Division	3.3	3.3	3.1	2.6	4.7	4.7	3.3	6.5

Note

1. Divisional figures have been calculated by simple averaging of district figures.

2. For North Monghyr district only figures for Begusarai have been given for 1916. For districts like Bhagalpur and Monghyr sometimes separate figures have been given for northern and southern part of the district. Simple average of them have been taken to calculate district figure.

Source:

Prices and Wages in India, relevent issues.

^{40.} File No. Fam. 16/44, Deposit No. 1945. Extract from the Government of Bihar, Revenue Department.

^{41.} L.R. File No. Fam. 13/44, Bihar and Orissa Proceedings 45; Government of Bihar, Revenue Deptt., 1944.

Table 9.17 which gives similar wage data for longer period between 1890 and 1938 confirms this rising trend in the money wages. It further shows that the money wages of the agricultural labour is lower than that of the village artisans and all kinds of urban labourers. Only the men and the boys in the general labour categories get less than them. For the agricultural labourers, the ploughing, reaping and transplanting (for men) are more paying jobs than other agricultural work. (Table 9.17).

Table 9.17

Wages and Wage Differential of Agricultural Labourer and Semi Urban Labourer (Operationwise : Ana Per Day)

		1890	1895	1900	1905	1910	1938
	Agricultural Labour :-						
1.	Ploughmen	2.5 (100)	2.5 (100)	2.6 (100)	2.6 (100)	3.5 (100)	3.17 (51)
2.	Reaper	2.5 (100)	2.5 (100)	2.6 (100)	2.6 (100)	3.5 (100)	6.17 (100)
3.	Weeder-Man	1.75 (74)	.75 (74)	2.5 (96)	2.5 (96)	3 (85)	3.17 (51)
4.	Weeder-Woman	1.75 (74)	1.75 (74)	2.6 (100)	1.75 (67)	2.5 (71)	2.84 (46)
5.	Sower and Transplanter-Man	2.5 (100)	2.5 (100)	2.6 (100)	2.6 (100)	3.25 (92)	3.45 (55)
6.	Sower and Transplanter-Woman	1.75 (74)	1.75 (74)	2.6 (100)	1.72 (66)	2.25 (64)	3.17 (51)
7.	Other Agricultural Labour	1.75 (74)	1.75 (74)	1.75 (67)	2.25 (86)	2.25 (64)	
8.	Village Carpenter	2.6 (104)	2.6 (104)	4.06 (153)	4.6 (100)	5 (142)	
9.	Village Blacksmith	3.75 (150)	2.6 (104)	3.5 (134)	4 (153)	4.5 (128)	
10.	Village Gharami	2.6 (104)	3.25 (130)	3.5 (134)	4 (153)	5 (142)	
	<u>Urban Labourer:</u> -						
11.	Carpenter (common)	4 (160)	4 (160)	5 (192)	5.6 (215)	6.9 (197)	
12.	Blacksmith (common)	4 (160)	4.9 (196)	5.6 (215)	6 (230)	7 (200)	
13.	Mason (common)	3.5 (140)	3.9 (140)	4.6 (176)	4.9 (188)	5.6 (160)	
14.	General Labour-Man	2.6 (104)	2.5 (104)	2.6 (100)	2.5 (96)	3.5 (100)	
15.	- do - Woman	1.75 (70)	1.75 (70)	2.5 (96)	1.75 (67)	2.9 (82)	
16.	- do - Boy	1.4 (56)	1.4 (56)	1.75 (67)	1.65 (63)	1.75 (50)	

Sources: 1. Report on Enquiry into the Rise of prices in India.

^{2.} Agricultural Wages in India, 1952, Vol I

In order to stress further some of these aspects of wage trend a new set of wage data have been presented in the Tables 9.18 to 9.20 along with their graphs. Table 9.18 shows the time series (from 1873 to 1907) of the nominal wages of ablebodied agricultural labour and their indices. Table 9.19 gives their real wage series in the terms of bajra and rice. The indices of these two series have been shown in table 9.20. The graphs of all these series - nominal and real wages — have been shown at the end of this chapter.

This wage data have been taken from the <u>Prices and Wages of India</u>. But it has to be adjusted to neutralise as far as possible some of their inherent drawbacks. The <u>Price and Wage</u> data does not include 'supplement' and actually represents wages of the urban areas, which, of course, more than offset the exclusion of the supplement component in the wages of agricultural labour. The wage data given by <u>Report of Enquiry into the Price Rise in India</u> includes "supplement" but its data collection is open to question and contains unknown biasas.⁴²

To solve the problem we have adjusted downward the <u>Price and Wage</u> data by 16 percent. The ratio of 16 percent has been arrived at by taking the ratio of the simple average of the wages between 1887 to 1889 of Purnea, Patna, Monghyr and Patna in the <u>Price and Wage of India</u> and the corresponding average wage rates of these districts as reported in the <u>Report on the condition of the Lower classes of Population</u>. The adjusted wage series are in anas per day. For calculating the real wages the nominal wage series have then been converted to the corresponding amount of rice and <u>bajra</u> by using the corresponding retail prices of these food grains given by the Commercial Intelligence Department of the Government of India. These wage rates are limited to four districts of Patna, Muzaffarpur, Monghyr and Purnea only.

The graphs of real as well as nominal wages presented here shows the presence of fluctuations. This observation is valid for all the four centres of Patna, Muzaffarpur, Monghyr and Purnea. Table 9.18 shows the nominal wage, The index of nominal wages show rise in the wages of agricultural labourers in all the four districts (Table 9.19). However, when the nominal wages are converted to real wages in terms of

^{42.} K. L. Datta, Report on An Enquiry into the causes of the Rise of Prices in India, Calcutta (1914).

^{43.} Letter dated 30th June, 1888, Bhatacharya has reduced it by 18 percent (Bhattacharya 1985)

^{44.} Variation in Indian Price Level from 1861 to 1909 Expressed in Index Number, (1910).

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 Table 9.18

 Nominal Wages and Index Number of Able Bodied Agricultural Labourer (Adjusted Series)

EA	Index No.	77	92 92 92 100 100 100 100 100 1118 1118 1118 111
PURNEA	Wages	1.78	22.122 22.122 22.122 22.122 22.133 22.133 22.133 23.333 23.3333 23.3333 23.33333 23.333333 23.333333 23.33333333
	Index No.	100	100 100 100 100 124 124 124 124 127 128 188 188 188 188 188 188 188 188 188
	MONGHYK Wages	1.34	1.34 1.34 1.34 1.34 1.34 1.34 1.34 1.67 1.67 1.67 1.67 1.67 1.67 1.67 1.67
Number of the property	RPUR	Index No.	267 0 100 100 100 130 160 140 140 160 160 160 188 188 188 188 180 140 140 140 140 140 140 140 140 181 181 181 181 181
	MUZAFFARPUR	Wages	2.97 0.0 1.11 1.11 1.11 1.11 1.11 1.156 1.56 1.56 1.78 1.78 1.78 1.78 1.78 1.78 1.56 1.56 1.78
Nominal Wages and Index		Index No.	100 100 100 100 100 100 100 100 100 100
	PATNA	Wages	1.56 1.56 1.56 1.56 1.56 1.56 1.56 1.56
	Voor	Ica	1873 744 775 776 777 778 779 1880 881 882 883 884 884 885 886 886 887 887 889 890 1900 1900 1900 1900 1900 1900 1

: 1. For adjustment procedure see the text.
2. For index number the base year is 1877-78. Note

Prices and Wages in India, relevent years. Source:

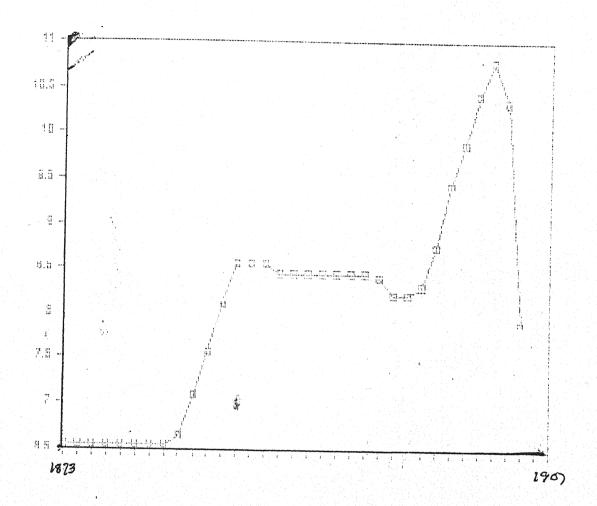
Table 9.19

Real Wages of Agricultural Labour (adjusted series)

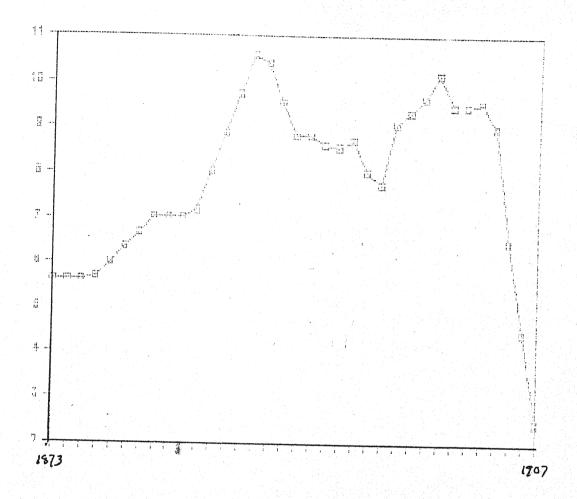
	Purnea	2.49	2.56	3.31	3.37	2.31	1.82	000	1000	0.00	20.00	9.37		2.24	3.37	2.97	2.64	2.35	3.02	3.25	2.36	2.3 9.66	2.55	2.49	2.55	1.8/	9.76	1.95	2.88	2.91	0.03 0.70	0.00	1.72	3.15		
rs per day)	Monghyr	1.87	1 92	20.5	5.03	1.46	1.10	00.5	1.10	1.99	2.37	2.36	2.44	2.49	2.45	2.16	2.89	2.58	2.8	3.01	2.59	1.67	3.07	်က	സ	\sim \circ	$D \subset$	\sim	-	2.14	(. V C	,, ~	, .,		
In Bajra (sers per day)	Muzaffarpur			, ,	4.04) F	1.21	0.88	1.28	1.33	1.58	1.57	2.61	2.33	9.29	20.6	20.5	1.82	1.86	2.13	2.14	2.09	2.42	2.33	1.75	0.92	1.47	1.58	1.11	1.66	2.5	2.61	1.96 1.69	1.94		
	Patna	Sara a	2.18	2.24	2.44	2.48	1.7	1.23	1.37	1.86	2.22	2.21	20.0	0.50	200	7.34	2.0	2.43	2.00	67.70	2.4 2.06	2.01	2.32	2.45	7.4 7.7	1.38	2.21	1.8	1.43	2.12	3.06	3.2	2.4	2.35		
	Dumes	ruinca	2.2	1.87	2.57	2.3	1.97	1 79	1 85	33.5	9.02	200	0.70	7.00	1.50	2.07	2.23	2.32	2.17	2.27	, , ,	1.9	1.75	1.7	1.81	1.75	2.14	2.38	1.8	1.91	9.03	2.45	1.96	1.26	1.0.1	
Real wages of right		Mongnyr	1.63	141	$\frac{1}{1}.6\overline{2}$	1.45	1.24	101	1.04	1.00		2.13	2.10	1.87	1.53	1.5	1.62	2.54	2.38	2.1	2.13	2.08	1.10	2.05	2.18	1.19	1.00	1.72	2.25	1.38	1.51	7.19	1.47	1.19	1.34	
	In Rice (sers per day)	Muzaffarpur			4 6	• .	103) (·	97.7	ŏi.i	91.	1.43	4.	2	1.43	1.41	1.51	$\overline{1.79}$	1.68	1.39	1.5	1.73	1.45		1.45	2.62		1.00	1.13	1.07	71	1.50	1.05	1.19		1
		Patna	1 93)	1.04	1.09		1.44	1.21	1.25	1.59	2	2.02	1.75	1 43	2.23	202	 	1.9	1.68	1.7	1.66	1.39	1.50 1.50	2.32	2.62	1.2	1.57	1.02	1.38	1.84	 		1.72	1.36	
		Year	1073		74	2,5	اً (۵		78	79	1880	81	83	83	84	t K	3 %	2 & &	3 &	38	1890	-291	35 37	<u> </u>	ት ይ ያ	396 36	26	86 6	ეე ეე	1900 01	02	03	40	လ ဝ ဝ	0 04	

Note: For Adjustment See the Text. Sources: Prices and Wages in India, relevent issue. Table 9.20

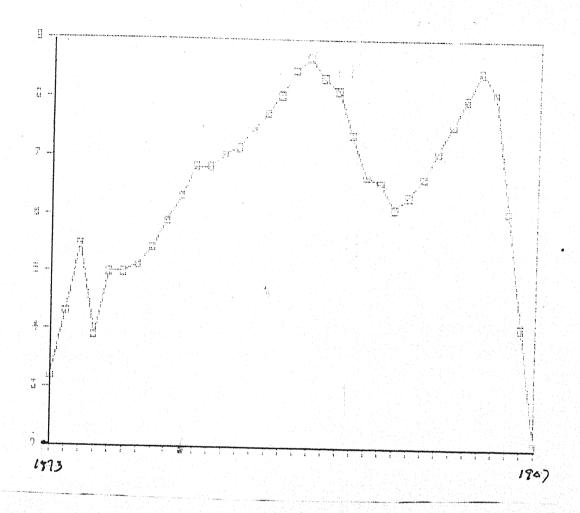
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	Ş		148 152 165 165 169 115 84 93 115 197 197 197 197 197 197 197 197 197 197
	In Boir	Muzeffernur	441 - 441 - 441 - 115 83 123 123 126 150 149 222 218 191 177 202 203 203 203 203 204 203 204 203 204 203 245 245 189 166 87 170 166 87 189 166 87 189 166 87 189 189 189 189 189 189 189 189 189 189
377-78 - 1001	1	Patna	149 153 167 168 116 84 93 127 151 151 156 159 201 178 164 141 158 167 164 119 94 151 179 209 219 160 160
Index of Real Wages (1877-78	11) co9n	Purnea	117 99 137 122 104 95 98 125 158 158 158 160 101 101 101 103 104 67 96
		Monghyr	142
	In Rice	Muzaffarpur	
		Patna	145 109 142 127 109 91 94 142 130 152 107 168 158 143 126 128 128 128 128 128 128 128 128 104 104 113 104 113 105 104 113 113 105 104 113 105 107 107 108 118 118 118 118 118 118 118 118 118
		Year	1873 744 775 776 777 788 788 881 882 883 884 887 889 891 992 993 994 995 997 997 997 998 998 997 997 997 997 997



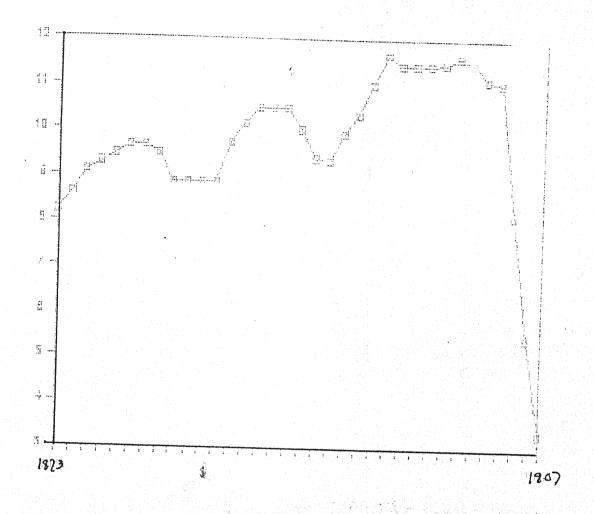
Nominal Wages ; adjusted series in five years moving average (Patna)



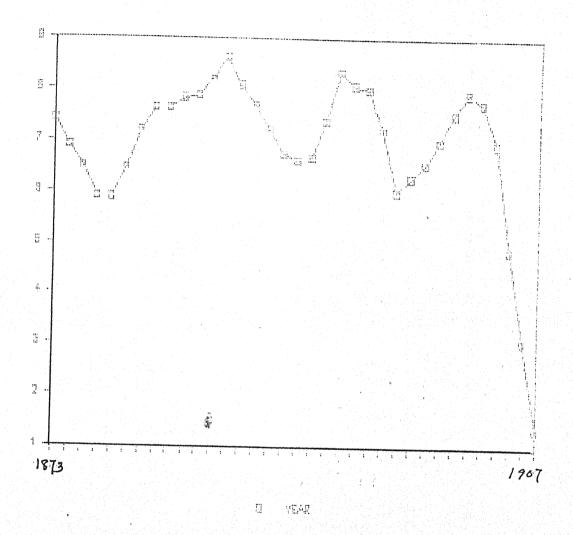
Nominal Wages; adjusted series in five years moving average (Monghyr)



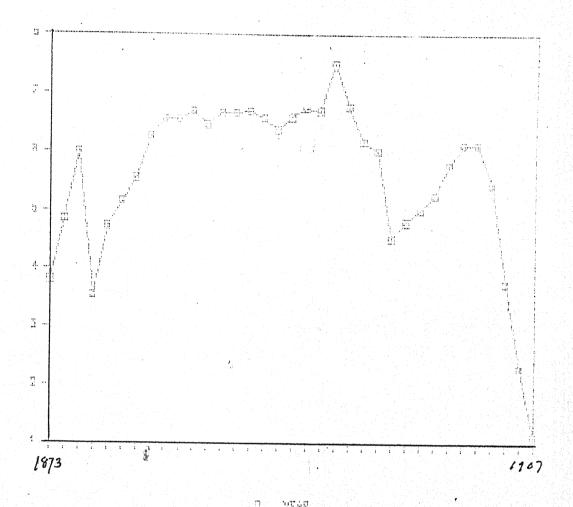
Nominal Wages; adjusted series in five years moving average (Muzaffarpur)



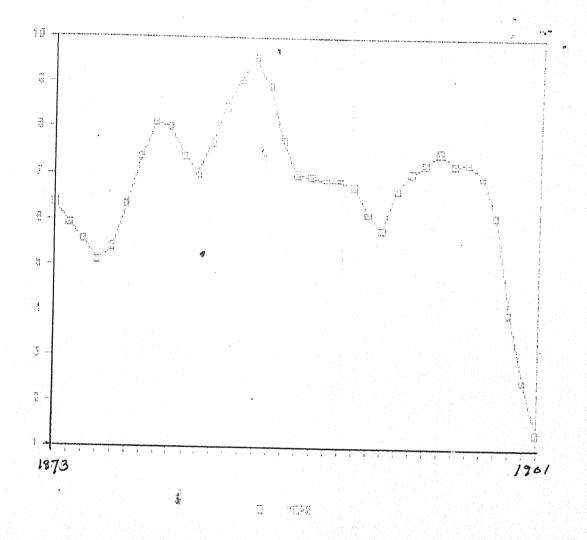
Nominal Wages; adjusted series in five years moving (Purnea)



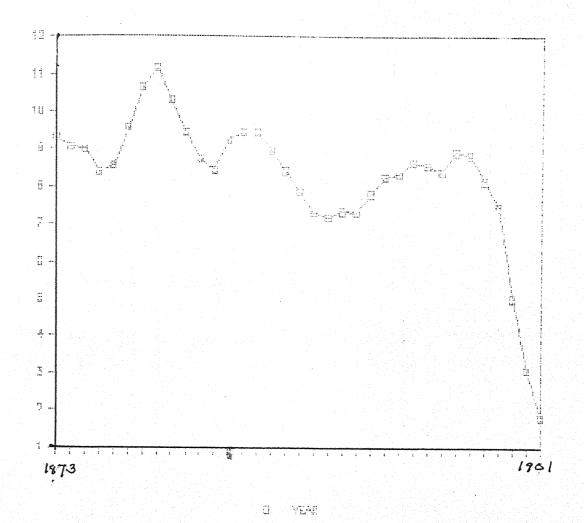
Real Wages (rice); adjusted series in five years moving average (Patna)



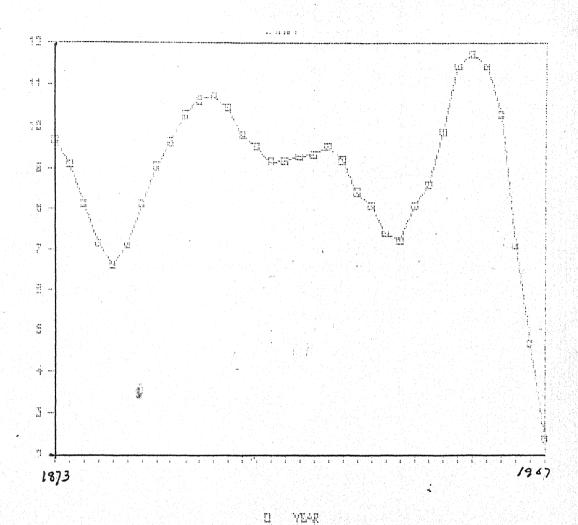
Real Wages (Muzaffarpur) in Bajra; adjusted series in five years moving averages.



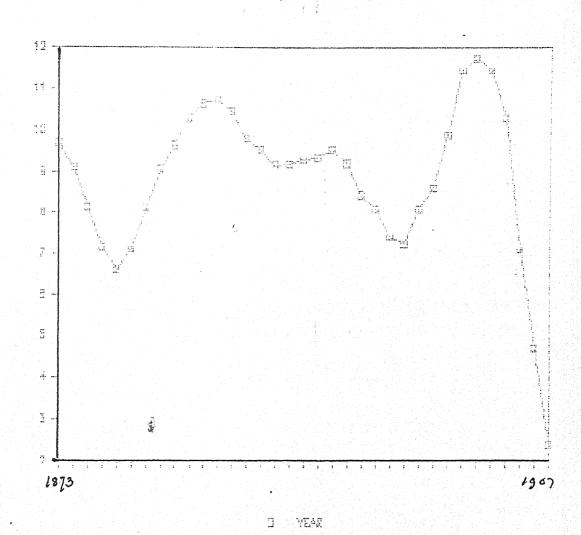
Real Wages (rice); adjusted series in five years moving average (Monghyr)



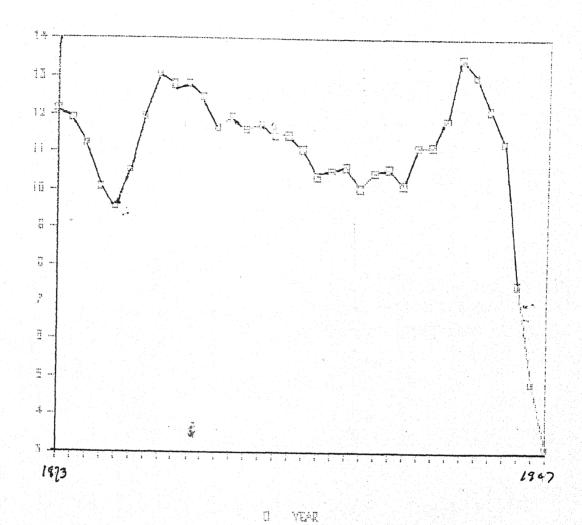
Real Wages (rice); adjusted series in five years moving average (Purnea)



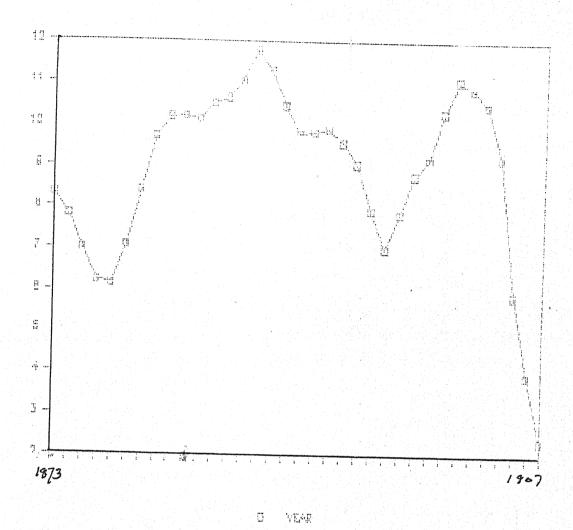
Real Wages (Bajra); adjusted series in five years moving average (Patna).



Real Wages (Bajra); adjusted series in five years moving average (Muzaffarpur)



Real Wages (Bajra); adjusted series in five years moving average



Real Wages (Bajra); adjusted series in five years moving average (Purnea)

rice and bajra (Table 20) we find two different trends: '(1) The real wages in terms of rice shows fall in all the districts. (2) But the real wages in terms of bajra shows some bare increase. The difference in the movement of prices of these two foodgrains possibly explain the difference in the two trend. Between 1861 and 1909 the price of bajra has risen more slowly in relation to the price of rice'. The crucial factor is, therefore, price.

9.5 Conflict between the agricultural labour and the cultivators

In the early decades of twentieth century there were frequent conflicts between the cultivators and agricultural labourers in Bihar on the question of higher wages as also on the forms of payment of wages. In April 1908 the agricultural labourers of Patna and Tirhut struck work as the cultivators wanted to commute grain wages to cash wage because of the price rise in 1908 and that too at the lower prices of 1907. In Bhagalpur the worker wanted to work either at old grain wages or at the higher money wages in order to compensate their loss from the 1908 higher prices. In Patna district the workers struggle for higher wage continued in 1909. The workers protested demanding higher wages as compensation for continued rise of foodgrain prices. In Patna this struggle for higher wages continued unabated. It was reported that persistently high foodgrain prices in the district was the main reason for this persistent agitation. In Bhagalpur, however, the resistence of the agricultural labourer petered out as the local foodgrain price slackened.

Conclusions of this chapter were, therefore, the following:

(1) The cultivating labourers are employed for short period. (2) This class of labourers were migratory in nature. The time and direction of migration depended on the time and the coarse of monsoon. (3) Though the census information created difficult problem of analysis, they showed that the number of agricultural labour rose between 1881 and 1931. (4) Their wages were paid mostly in kind. The supplement part was almost always paid in kind. Form, modes and rates of wages were varying. (5) The wages tended to be stagmant. The adjusted wage series of the able bodied agricultural

^{45.} See Variation in Indian price Level from 1861 to 1909 Expressed in Index Number (1910),p.15.

^{46.} Land Revenue Administration Report (1908-09)

^{47.} Land Revenue Administration Report (1910-11)

laboures show that the nominal wages rose but the real wages fell. (6) The cultivating classes tended to opt for payment of cash wages as a response to rise in the foodgrain prices. The labouring class, on the other hand, demanded kind wages or higher money wages. The result had been strikes on some occasions. (7) Some degree of 'differentiation' was there in the rural society. But the 'pauperisation' was universal.

Chapter X

CONCLUSIONS

In this work, we have enquired into changes in the pattern of agricultural growth and in material conditions of labouring classes as well as their relations with their cultivator employers - landlords or rich peasants - in North Bihar during the later period of the British rule. Specifically, the period covered is between 1892 and 1941. During this period Pax Britannica opened up the interior of the country through the construction of roads and railways which brought it closer to the world market system. The impact of this integration was far reaching and substantial.

First, agricultural production in North Bihar fell during this period of colonial rule (Table 10.1). This fall was particularly marked in the foodcrop production. The proportionate fall in agricultural production in general, and food production in particular, in this region was higher than in Greater Bengal. Hence North Bihar agriculture exerted a downward pull on the agricultural performance of Greater Bengal during the period. The period 1907 to 1912 could be identified as the turning period in North Bihar after which the agricultural slump set in. With a positive and accelerating growth in population, particularly after 1921, this meant increasingly decreasing availability of food to the people from this period onwards.

Table 10.1

Long Term Growth Rates of North Bihar Agriculture

	Output Area	Yield Per Acre
All crops	- 0.4 - 0.3	- 0.07
Food crops	- 0.9 - 0.5	- 0.4
Cash crops	- 1.0 0.8	0.2

For sources, see relevant tables in Chapter 3 and 4.

In contrast to the generally depressed state of food production, however, cash crop production increased during this period. The rate of increase was higher than in Greater Bengal and even in Punjab and Madras, the two quick growing agricultural regions of British India. Two specific features of cash crop production in North Bihar should be noted in this connection: First, indigo production became extinct after the 1910s and was replaced by sugarcane production. Second, cash crop production was marked by a high degree of fluctuations.

Turning to the components of the volume of agricultural output, we see that it can be decomposed into the acreage under crop's and their productivity. In North Bihar the annual percentage growth rate of crop acreage declined in the period between 1891 and 1941. Further, over this period the growth rate of crop acreage was marked by high degree of fluctuations and regional variations. The fifteen years between 1907 and 1922 can be identified as the period of maximum acreage under crop in North Bihar.

Within this generally declining trend rate two contradictory tendencies persisted. The annual percentage growth rate of foodcrop acreage was negative during these fifty years. But the rate of growth of acreage under cash crop was positive (Table 10.1). In fact, the growth rate of acreage under cash crop in North Bihar was higher than in Bengal proper as observed by Islam. Thus, decline of acreage under cash crops in Greater Bengal during this period, as observed by Blyn, should be sought not in the regions of North Bihar but eleswhere. Both the acreage under food crops and cash crops, evince two other features. The inter division distribution of acreage varied overtime and the divisionwise total acreages also fluctuated greatly from year to year.

The yield per acre, the other component of the volume of agricultural output, was virtually stagnant. The trend rate change of foodcrop yield per acre was distinctly negative. But the cash crop yield per acre showed a small, positive rising trend (Table 10.1).

Increase in cash crop production was achieved mainly by transfer of areas from food crops to cash crops. The ratios of acreage under non-food grains to total crops showed increase particularly after 1930s, both in the divisions and in North Bihar as a whole. Also, the ratios of yield per acre of non-food crops to all crops rose throughout the period, except in the initial years, in the divisions as well as in North Bihar as a whole.

Thus the relationships between output, on the one hand, and area and yield per acre, on the other hand, can be summarised as follows: In case of all crops, both the rate of acreage and yield declined over time but the latter was the main contributing factor to the decline in output. Among the crops, the food crops were the main culprits in such a poor record of crop production. The yield per acre and acreage of food crops both contracted significantly, but the acreage contributed little more than half to the measured contraction in foodcrops output. In case of cash crops both the crop acreage and productivity increased over time with the rise in acreage contributing the major part to

the overall growth of production of cash crops. The better performance of cash crops could not entirely offset the negative trend contributed to overall production of agricultural output by the performance of food crops.

Coming to individual crops, we find that paddy was the single most important crops in North Bihar and both the yield and acreage of rice declined (Chapter IV). The production of maize and barley, two other major food crops, also fell during this period. The production of only two crops, wheat and gram increased but only just. Production of all the major cash crops such as sugarcane, linseed, rape and mustard and jute increased. But the production of tobacco and indigo fell. Indigo production, as we have already noted, became extinct in the twentieth century under the impact of international market. Indigo was largely replaced by sugarcane. The significant dose of tariff protection awarded to sugar by the rise of import duty on 1931 contributed to this significant growth.

In case of rice, both winter and autumn as also in case of maize, the main contributing factors to the decline of their production were shrinkages in their cropped area and fall in their yield per acre. Both these two components show negative growth rates. On the other hand in case of wheat and gram, both the acreage and yield per acre growth rates were positive, which reflected in the positive rates of production. One interesting case is the production of barley. In this case the rate of production, - 0.02 per cent, declined slightly, but the growth rate of cropped area was 0.5 per cent and the growth rate of yield per acre rate was -0.5 per cent.

These individual crops showed some specific features: First, their rates of growth of production, cropped area and productivity showed high degree of fluctuations from one quinquennium to the other. This is particularly so far the cash crops like sugarcane and jute. Second, the crucial period is 1907 to 17 after which the agricultural production, specially food production, declined steadily. The production of sugarcane, the main cash crop of the region, however, increased, though the real spurt in their production came after the quinquennium 1932-3 to 1936-37 especially after the 1930, when official protection was granted to it.

This depressed agriculture affected the material well being of the labouring classes. It would be reasonable to expect that the depressed condition of labouring classes would also react on acreage and yield of agricultural production, but we have

not enquired into their question of exactly in what manner this interaction will take place. These 'labourers' were not workers in a capitalist system of agriculture who were separated from their instruments of production. The rural society of North Bihar in the late nineteenth and early twentieth century was at a different stage of 'differentiation' where this process of separation remained incomplete. This was reflected in coexistence of various forms of labour, interacting with each other in labour market. Broadly, one can identify five categories of labourers: (1) village functionaries; (2) artisans; (3) small peasants (4) <u>kamias</u> and (5) <u>majurs</u>.

Village functionaries worked either in zamindars' establishments or for the village as a whole. Though functionally different, they were zamindar's men and ultimately got paid from the village surplus. Their income came from (i) their direct allowances, cash or kind, (ii) land (free or in low rents), (iii) other customary deductions and (iv) abwabs. The relationship of these village functionaries with zamindars and ryots was complex and multifacet. The upper strata among them, while being subservient to the zamindars, often amassed wealth from the estate of their masters through illegal means. From the ryots also they appropriated rasums (shares) and abwabs, euphemistically called 'perquisites'. The lower functionaries among them, such as cropwatchers, weighmen etc, however, while sharing in all these forms of income, remained themselves appropriated and pauperised. Analytically it should be possible to distinguish the village functionaries associated primarily with control (such as patwaris, chowkidars etc) from those associated primarily with the provision of collective service (e.g., poor Barahil, crop wateher,). However, since the superior functionaries could also act as the mouthpieces of the collective interest of the village, an ambiguity in their position remains.

Artisans created the instruments of production (e.g. plough etc.) while at the same time contributing to agricultural labour. These artisans survived because of necessities for creating and maintaining (a) productive forces and (b) basic necessities of life in the village. But because of diminuation of their artisanal industries following de-industrialisation, these artisans were compelled to supplement their artisanal income by working in others farm as agricultural labour and/or leasing in small plots of land in onerous terms. Some of them like Jolahas and Nunias became virtually agricultural labour. Their allowances, both from traditional crafts, agricultural labour and other works were in grains mostly. It was determined by customs and, therefore, tended to be rigid.

Artisans' relations with their cultivator employers changed substantially, under the market influence. Earlier patron-client relationship predicated on a sense of communal identity for all conceptualised in jajmani system, were being increasingly affected by ingressing market relations. The artisans were, on the one hand, increasingly expected to become more efficient in their work and output and, on the other hand, accept payments, which were **other nadket** determined and less than traditional allowances. More importantly, their jajman-cultivators refused potection during economic crisis and natural calamities which were integral part of their traditional relations. The crowd of labouring classes/castes in the relief centres during such crisis testified to this changing relationship. However, the old practices like <u>abwabs</u> and forced labour persisted. Thus these artisans were subjected to exploitions through markets as well as pre-capitalist relations. These artisans submitted to this complex appropriation almost without protest.

Small peasant: was the other category who joined the agricultural labour force. Poorly endowed with land and other instruments of labour they cultivated their tiny family plots (which included rented land) primarily through family labour, supplemented by exchange of labour. These were the preserve of natural economy, which were at various stages of 'differentiation' in late nineteenth and early twentieth century. But their subsistence farm did not provide them enough which compelled them to work in others farm during the off-season. This supplementary jobs strengthened this natural economy. Often these small cultivators were indebted. Instances were there that they paid their debts back either by working in creditors' farm or mortgaging their crops before they were ripe, suggesting linkages between labour, credit and product markets.

Fourth category of labouring class was the <u>Kamias</u>, or the bonded labour. The <u>Kamias</u> persisted because of non correspondence between various structures of North Bihar rural society in the nineteenth and early twentieth century. The slavery was made illegal long back; the law courts made any kinds of bondages void, and the <u>Kamiauti</u> act of 1920 made the <u>kamia</u> system illegal. But the upper caste landowners and cultivators who did not touch plough, wanted assured labour supply for their agricultural operation. The landless lower caste, small peasants, tribal etc. who had no or only limited opportunities to migrate elsewhere for jobs, accepted bondages in order

to protect themselves against uncertainties of agricultural work. The immediate cause of bondage was, however, the need for money for economic and social reasons by the pauperised rural poors and tribals.

Kamia's wage was lower than that of agricultural labour. It was in coarse grain. The kamias did all kinds of work, in all hours of the day and every day of the year. His wage was for wage of survival only. Loan that was given to them was to maintain his bondages. The conditions of loan payment assured their bondages.

Majurs or casual labour was the last of five major categories of labour of our study. While other forms of labour were at various stages of 'differentiation,' the casual labour was nearest to our concept of labour who had nothing but his 'labour power' to sell. Belonging to low castes, with little or no 'assets', they migrated from one area to the other for jobs. Their wages were mostly paid in kind and their 'supplements' were almost always paid in kind. Forms, modes and rates of payment of their wages varied from place to place and season to season, Local conventions and traditions contributed much to their wage determination and rigidites. The available wage data, in spite of all their frailties, showed that their nominal wages increased but their real wages decreased over fifty years from 1892 to 1941. One could take them as the final product of the system of exploitation to which all the categories of agricultural labour were subjected: When a process of colonial exploitation and predatory commercialisation had run its full course, the casual labourer could appear in his final, dispossessed incarnation. This ever swelling reserve army of labour could also act as a guarantee that the other forms of subordinate labour could obey the colonial capitalist rules of the game most of the time.

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APPENDIX I

NORTH BIHAR

	Output (Tons)	Area (acre)	YEILD	LBS
1900-1 1901-2 1902-3 1903-4 1903-4 1904-5 1905-6 1905-7 1907-8 1909-10 1910-11 1911-12 1913-14 1914-15 1915-16 1915-16 1917-18 1918-19 1919-21 1920-21 1921-23 1921-23 1922-24 1923-24 1924-25 1925-26 1925-26 1926-27 1928-3 1931-3	310553 364879 304859 289305 324553 347035 357862 174323 279826 154072 144406 151038 144486 164728 166159 119796 105633	78896 79046 74130 77396 7848 11827 7445		728 728 730 728 730 728 730 728 730 729 727 759 730 671 706 869 772 689 718 651 646 531 646 531 646 531 646 531 646 531 646 531 646 531 646 547 648 648 649 649 649 649 649 649 649 649 649 649

	P	ATNA E	IVISION	
	Output (Tons)	Area (acre)	YEILD	TB2
1900-1				
1901-2	15400	5500		627
1902-3 1903-4	21504 8960	7680 3200		627 - 627
1904-5	16324	5830	0	627 627
1905-6 1906-7	11676 18984	4170 6780		627
1907-8	19488	6960	0	627
1908-9 1909-10	17976 18620	6420 6650		627 627
1910-11	20692	7390		627
1911-12	17668	6310		627
1912-13 1913-14	17821 22705	6740 9030		592 563
1914-15	21793	8640		565 811
1915-16 1916-17	31075 23453	8580 7810		672
1910-17	21378	8440	0	567
1918-19	11464 11948	7110 6830		361 391
1919-20 1920-21	12783	6790	00	421
1921-22	16915	6870		551 381
1922-23 1923-24	11137 11386	6540 \$6720		379
1924-25	10050	582	00	386
1925-26	15037 6563	675 494		499 297
1926-27 1927-28	9960	528	00	422
1928-29	11833 14686	566 592		468 555
1929-30 1930-31	14203	576	00	552
1931-32	13406	578 579		519 455
1932-33 1933-34	11786 10539	600		393
1934-35	12555	632		444 356
1935-36 1936-37	9333 11640	587 605		430
1937-38	11526	565	00	456
1939-40				436
1940-41 1941-42				395

T.DIVISION

	Output (Tons)	Area (acre)	YEILD	LBS
1900-1 1901-2 1902-3 1903-4 1904-5 1905-6	162758 161092 159188 156094 156723	478700 473800 468200 459100 460950	, et	761 761 761 761 761

1906-7	157352	462800	761	
1907-8	175034	515600	760	
1908-9	140488	413200	761	
1909-10	177386	462900	858	
1910-11	186218	547700	761	
1911-12	190264	559600	761	
1912-13 1913-14	178893 231335	556200	720	
1914-15	202898	598400 § 586200 +	865	
1915-16	172970	602400	775 643	
1916-17	183323	507400	809	
1917-18	221872	601400	826	
1918-19	208906	591800	790	
1919-20	188882		692	
1920-21	218743	600600	815	
1921-22	224932	605300	832	
1922-23	171220	604600	634	
1923-24	121647	541100	503	
1924-25	162860	502700	725	
1925-26	141412	486000	651	
1926-27	142764	465700	686	
1927-28 1928-29	139785 175475	465000 568800	673 691	
1929-30	157672	472900	746	
1930-31	11972	436700	61	
1931-32	97644	420600	520	
1932-33	80375	404500	445	
1933-34	76549	409000	419	
1934-35	78117	396700	441	
1935-36	84888	408300	465	
1936-37	89834	396800	507	
1937-38	95357	406800	525	
1939-40	62359	811600	172	
1940-41	38336	405700	(211	
1941-42	79154	406200	436	

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BHAGALPUR DIVISION

	Output (Tons)	Area (acre)	YEILD	LBS
1900-1 1901-2 1902-3 1903-4 1904-5 1905-6 1906-7 1907-8 1908-9 1909-10 1910-11	275648 214816 261056 262624 247264 231904 234112 238912 276224 279424 241184	861400 671300 815800 820700 772700 724700 731600 746600 863200 873200 753700	•	716 716 716 716 716 716 716 716 716 716

1912-13	226720	788300	644
1913-14	208349	777900	599
1914-15	176987	362400	1093
1915-16	327223	852600	859
1916-17	227524	825400	617
1917-18	214688	742600	647
1918-19	185810	733600	567
1919-20	189213	727200	582
1920-21	212591	733800	648
1921-22	143692	739300	435
1922-23	213426	701300	681
1923-24	177520	701200	567
1924-25	191969	629400	683
1925-26	148410	624900	531
1926-27	139978	601100	521
1927-28	174808	625800	625
1928-29	159727	858900	416
1929-30	185504	659000	630
1930-31	143143	214300	1548
1931-32	168776	459055	823
1932-33	61911	298800	454
1933-34	57318	319900	401
1934-35	60366	330500	409
1935-36	50265 -	274300	410
1936-37	63254	316600	447
1937-38	59276	321500	412
1939-40	46254	313700 .	330
1940-41	55845	276900	451
1941-42	37294	208600	400

YEAR	OUTPUT	AREA	YEILD	lbs
1893	2427060 1840831 3970814 2840766 3339435 4387153 2036157 2085814 666005 8961455 3263391 3773777 2132704 4135744 4135744 4135744 4135744 4135744 3665938 192031073 2432520 3015312 1738137 2593060 2125998 1964147 2081073 2498448 2075623 2125986 1358625 1746795 1290214 1773758 1410860 1641278 1012948	9973500 9973500 99782000 99782000 99883000 97439000 81946000 692139000 771098000 771098000 771098000 771114000 46162000 69824000 69824000 69824000 67817000 678373000 678386000 63393000 64126000 63393000 63393000 64126000 63393000 63393000 63895000 6		57209219354908 557209219354908 557209219354908 57209219354908 572088 57209219354908 666666665199166327134240880 77208377 772085 77208 7720

YEAR	OUTFUT	AREA	YEILD	lbs
1893_94 1894_96 1895_96 1896_97 1897_98 1898_99 1899_1900 1901_02 1902_03 1903_04 1904_06 1906_07 1908_09 1909_10 1911_12 1912_13 1914_15 1915_16 1916_17 1917_18 1918_19 1919_21 1921_22 1922_23 1923_24 1924_25	83595 8192345 9346796 1336766 1337744 1107135 1389996 1111637837 132652831 132652831 132652831 132652831 132652831 13265849 13265849 113621873 1256849 111088 12575683 12585120 12585120 12585120 12585120 12585120 12697968 1269796	2695500 2696100 2636500 3040200 3020200 2956400 1953900 2655400 19603300 2743600 2743600 2743600 2543900 2543900 20836400 2086400 2086400 20836400 15747300 1734900 1739200 1749300 17493300 1493300		627 627 627 6335 619 619 619 619 619 619 619 619 619 619

RICE TIRHUT DIVISION

YEAR OUTFUT AREA YEILD 1bs

1893_94	996154 948880 901604 908738 921717 910435 850570 504284 1268252 1115995 1060235 1371662 499986 818024 228390 6426607 1042735	3483800 3512900, 3548700 3108800 3164400 3219300 3226700 2997300 2353300 2485500 2429700 2547200 3004900 2560300 2526600 1717300 2658100		621 635 635 643 643 643 643 643 643 643 643 643 643
1915_16 1916_17 1917_18 1918_19 1919_20 1920_21 1921_22 1921_22 1922_23 1923_24 1924_25 1925_26 1926_27 1926_27 1927_28 1928_29 1927_28 1928_29 1929_30 1930_31 1931_32 1932_33 1933_34 1933_34 1935_36 1935_36 1936_37 1937_38 1938_39 1939_40 1940_41 1941-42	752075 1128429 948062 935465 896434 846434 1142550 838631 1168477 459187 613392 850204 559356 763820 697174 593730 711068 445341	2828000 2825200 2627300 2702200 2584100 2532900 2516100 2640600 2587300 2547300 2576500 2576500 2505600 2613600 2416500 2504000 2054000 2173900 2435500 2142300		10165 1102 817 5146 105 705 705 705 705 705 705 705 705 705 7

RICE	BHAGALFUI	R DIVISION		
YEAR	OUTPUT	AREA	YEILD	lbs
1892_93 1893_94	1056147 1208091	3337500 3794200		708 713

1004 05	1001047		
1894_95	1201047	3769100	713
1895_96 1896_97 1897_98	1101403	3784100	681
1007.00	1101/39	3454700	714
1897 <u>-</u> 98 1898 <u>-</u> 99	1206071	3784300	713
1899_1900	1070043		717
		3361800	718
1900_01	T040002	3243400 2339900	718
1901_02	1370306	2652000	652
		2371500	1159 881
1903_04	1172065	2420100	881 1004
		3199500	1034 1138
1905_07	1025541	1693000	562
1907 08	670965	2081500	722
1908 09	183904	1253000	328
1909_10	1178965	2097100	1259
1910_11	880886	1541500	1280
1911 12	1236066	2162700	1280
1912 13	922880		
1913 14	1174465	2208300	1191
1914 15	571625	2180000	587
1915_16	1220578	2225400	1228
1915_16 1916_17 1917_18	1308039	2388700	917 1191 587 1228 1226 1160 523 1165 635 938
1917_18	1308039 1014059	1957900	1160
1918 19	499666	2136100	523
1919_20	998193	1918800	1165
1920_21	530747	1870500	635
1920_21 1921_22 1922_23	823508	1965400	938
1922_23	839101	2009500	935
1923_24	328382	1339300	549
1924_25	736028	1942500	848
1925_26	392816	1725200	769
1926_27	485568	1689700	643
1020 20	666990	1585100	934
1920 20	600550	1806200 1757700	819 793
1930 31	534830	1683400	793 711
1931 32	699235		856
1932 33	414413		583
1931_32 1932_33 1933_34	571402		700.
1934 35	501478	1832000	613
1935 36	404809	1688100	537
1936_37	505037	1300200	628
1937_38	443473	1643300	604
1938_39	387559	1621800	535
1939_40	416997		599
1940_41			418
1941-42	268852	1439900	418
表示的性质的 400 mm - 人名格兰 网络自然的 400mm,是是自然的第三			

MORTH BIHAR

Year	OUTPUT	AREA	YEILD	lbs
1895 _ 97 1897 _ 99 1897 _ 99 1897 _ 99 1899 _ 001 1901 _ 002 1902 _ 004 1904 _ 005 1905 _ 009 1906 _ 10 1908 _ 10 1908 _ 10 1911 _ 13 1912 _ 13 1913 _ 15 1915 _ 17 1917 _ 1918 _ 20 1921 _ 22 1922 _ 23 1922 _ 24 1923 _ 25 1926 _ 29 1923 _ 33 1933 _ 34	326463 444712 400703 399034 349012 272485 330510 338817 337186 309547 231690 321244	1530300 1486300 1486300 1486300 14160200 14263200 14263200 1357300 13229500 13240400 1259300 1259300 1259300 12593600 12593600 12593600 1323377500 13377500 13377500 13538500 13		911 921 922 933 935 935 935 935 935 935 935 935 935

PATNA DIVISION

YEAR	OUTPUT	AREA	YEILD	lbs
1894_96 1896_97 1896_97 1896_97 1897_98 1899_1900 19001_02 1902_03 1903_04 1904_05 1905_06 1906_07 1906_07 1908_1909_10 1910_11 1911_12 1913_14 1914_15 1915_17 1916_17 1917_18 1918_19 1919_20 1921_22 1922_21 1923_24 1925_26	94738 94737755 94737755 942705 942705 94298 94298 9471915 94719125 94719125 94719125 94719125 9471913 94813	211800 210300 210300 210300 21227000 2127000 2122000 2132000 2132000 2132000 2144000 2159000 2159000 1679000 1679000 17357000 17357000 1332000 11507000 11507000 118500 118500 1		1001 1006 1004 986 1000 1029 992 610 568 500 348 813 828 828 828 828

Year	OUTPUT	AREA	YEILD	lbs
1893_94 1894_95 1895_96 1895_97 1897_98 1897_98 1899_101 1901_02 1902_03 1903_04 1904_05 1904_06 1905_07 1908_09 1909_11 1911_13 1914_15 1914_15 1915_16 1917_1918 1917_1918 1917_1918 1917_1918 1917_1918 1917_21 1921_22 1922_23 1924_25 1925_26	280201 304674 2304674 230467316 2044440 2744440 22557223 2257223 226477 226479 22723 226479 22723 22723 22723 22723 22723 22723 22723 22723 22723 22723 2273 22733 2273	673300 673400 676200 634200 7485200 721200 5826700 6179300 6179300 6179300 6103100 6103100 6103100 624900 631600 631600 631600 6317300 631		1003 1009 1009 1009 1009 1009 1009 1009

Year	OUTPUT	AREA	YEILD	lbs
1892 -93 1893 -95 1894 -95 1894 -96 1895 -97 1897 -98 1898 -99 1899 -001 1901 -02 1902 -03 1903 -05 1904 -07 1908 -07 1908 -07 1908 -10 1911 -11 1911 -13 1913 -11 1915 -17 1915 -17 1917 -18 1919 -20 1920 -22 1922 -23 1923 -24 1925	237200 237200 232073 232073 2321581 2321581 2327103 2327103 1877404 1768213 14768213 14768213 14768213 14768213 14768213 14956500 1154599 115935610 115935610 115935610 115935610 115935610 1159361	65962000 6438000 6438000 6438000 644530000 645370000 6455750000 647600000 647600000 647600000 647600000 647600000 6476000000 647600000000000000000000000000000000000		1bs 800587880000000000000000000000000000000
1939_40 1940_41 1940_41	131546 93364 93364	385900		666 541 541

YEAR	OUTPUT	AREA	YEILD	lbs
1905_06 1905_06 1905_07 1907_08 1908_09 1909_10 1910_11 1911_12 1912_13 1913_14 1913_14 1915_16 1915_16 1915_16 1915_17 1917_18 1918_19 1919_20 1921_22 1921_22 1922_23 1923_24 1925_26	359919 418776 3098048 42022776 3098048 4298048 498929 33142478 33142475 5083725 3041729 410619 4584199 4584199 4584199 4584199 405060 4	1163300 1183500 1186700 1200900 1179700 1161200 1114200 1075500 1077500 1112000 1072000		76622 76622 76622 76622 7622 7622 7622

YEAR	OUTPUT	AREA	YEILD	lbs
1892—94 1893—95 1893—97 1895—97 1895—97 1897—98 1898—1900 1901—02 1902—04 1904—05 1905—07 1908—10 1907—08 1908—10 1912—13 1913—14 1914—15 1915—17 1917—18 1918—19 1919—22 1922—23 1923—24 1925	94193 1018493 1018493 10182095 11097577 1030435 110905 111080435 1110905 111080435 1110905 11108043 1110905 11	323500 342400 3675000 36776000 36776000 371604000 3716047000 36776000 3716047000 412369000 42369000 4246000 4246000 4246000 42477470 42477470 42477470 424770 424770 424770 424700		653 671 6223 6525 6666 671 75537 844 6655 757 427 427 427 427
1941-42				689

YEAR	OUTPUT	AREA	YEILD	lbs
1892_93 1893_94 1894_95 1895_96 1895_97 1897_98 1898_190 1901_02 1902_04 1904_05 1906_07 1908_07 1908_07 1908_1909 1911_12 1912_14 1914_15 1915_16 1916_17 1917_18 1918_20 1920_21 1921_21	110557 1115201 312033 110488 131779 131485 1313779 131485 13153327 10847551 10955341 1095541 1074451 117386221 117386221 117386221 117386221 117386221 117386221 11751381 1751381	3691000 3530000 3530000 3555000 4225000 42283000 42283000 3741000 3341800 3341800 3341800 335914000 34599000 359914000 4124000 4124000 4124000 412800 412800 412800 412800 412800 412800 412800 412800 412800 412900		667355 77368
1941-42	130050	349300		833

DARLEY

NORTH BIHAR

YEAR	OUTPUT	AREA	YEILD	LBS
1892_93 1893_94 1894_95 1895_96 1895_96 1897_98 1898_99 1899_1900 1900_01 1901_02 1902_03 1903_04 1904_05 1905_06 1906_07 1907_08 1908_09 1909_10 1911_12 1912_13 1913_14	2814579 31266401 1099 421699 4226932 4226932 422799308 422799308 433542 433543 4335445 443319 443319 443319 443319 443319 443319 443319 443319 443319 443319 443319 443319 443319 443319 443319 443319 44393	798800 8172000 8172000 11868000 118684000 1126214000 1125145000 112545000 112545000 112545000 112745000 112745000 112745000 11277100 1216400 1216400 1216400 12177100 12194300		7857 857 857 850 1059 971 1277 754 7754 7754 7754 834 904 845 831
1941-42	364294	1238000		659

BARLEY

FATNA DIVISION

YEAR	OUTPUT	AREA	YEILD	LBS
1892_93 1893_94 1894_95 1895_96 1896_97 1897_98 1898_99 1899_1900 1900_01 19002_03 19003_04 19004_05 19005_06 19007_08 19008_09 19001_11 1911_12 1912_13 1914_15 1915_16 1916_17 1917_18 1918_19 1920_21 1921_22 1922_23 1924_25 1925_26	75176 1046285 1046285 1046285 1046285 1069576 10955363 10955363 10955363 10955363 10955363 10955363 10955363 109553 104439 10448 104489 104489 104489 10448 10448 10448 10	1686000 1957000 1957000 1957000 19570000 19570000 197700000 197307000 198500 19850		91100351 91100351 1122452 91100351 1122452
1941-4	70223	256400		613

TIRHUT DIVISION

7				
YEAR	OUTPUT	AREA	YEILD	LBS
1893_94 1894_95 1895_96 1896_97 1898_99 1898_99 1899_1900 1900_01 1901_02 1902_03 1903_04 1904_05 1905_06 1906_07	173696 173896 167490 274672 3794407 3987341 140842 308687 369363 3653967 36529665 2926659 3622	425600 419100 513000 788600 850500 850500 850000 805100 915700 920500 923500 923500 923500 923500 923500 821200 751700 825100 896900 891100 893400 894200 894200 901200		852 915 915 1038 1038 1033 1033 1033 1033 1033 1033

BARLEY

BHAGAL.DIVISION

	DHAGAL.D1			
YEAR	OUTPUT	AREA	YEILD	LBS
1893 4 1894 1895 1896 1896 1896 1897 1898 1898 1898 1899 1899 1899 1899	393057 393057 4207 42	19590 195780 195	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	435 445 430 376 435 430 376 435 430 336 430 336 430 336 430 336 336 336 336 337 337 337 337 337 337

HORTH BIHAR

YEAR	OUTFUT	ARBA	YEILD	lbs
1892_93 1893_94 1894_95 1895_96 1896_97 1897_98 1898_99 1899_1906 1900_01 1901_02	220747 236538.5 215538.5 196112 157585 157938 1579958 161887 171608 264998 264998 264998 264998 264998 264998 264998 264998 264998 264998 264998 264998 264998 264998 264998 264998 264998 267436 267436 482486 4728547 398689 437763 437	865900 9275000 9275000 8211000 63164000 63364000 6483000 70553000 6747000 6747000 68491000 7804000 7804000 9150000 125832000 125832000 125832000 125725000 13143000 126725000 126725000 1276900 1276900 127700		5555555688688888888786111801182099645320273187705403922150020008454944444445355688888888888887861118011820996453202731877655555555555555555555555555555555555
1940_41	354983	1333500 1323100		584 600

FATNA DIVISION

YEAR	OUTPUT	AREA	YEILD	lbs
1893_94 1894_95 1895_97 1895_97 1897_99 1899_01_02 19001_02 19002_04 19004_05 19004_05 19005_07 19005_07 19009_11 19112_13 1913_14 1914_15 1915_13 1914_15 1915_13 1915_17 1917_12 1917_12 1917_12 1917_12 1917_12 1912_22 1922_23 1924_25	71017 70137 701377 7013077 633777 633777 1023177 10331476 10331471 11484912 1133471 11484912 11487321 11487321 11487321 1148771 1148732 1148732 1148732 1148732 1148732 1148732 1148732 1148732 1148732 1148732 1148732 114	185600 277736000 277736000 24524000 23454000 234575000 235775000 25504000 25504000 2657720 2657720 2657720 2657730 2657730 2657730 2657730 2657730 2657730 2657730 2657730 267773 267700 277731500 277731500 27775		66666673967300001082640985158 6666666668738888888696873985 666666687388888888888888888888888888888

TIRHUT DIVISION

77 FT % F%	OUTFUT	AREA	YEILD	lbs
1896_98 1897_98 1897_99 1898_1900 1900_02 19003_04 1904_05 1904_05 1904_05 1904_05 1906_07 1908_1908 1908_1909 1911_12 1911_13 19114_15 1915_17 1917_18 1917_18 1917_18 1917_18 1917_19 1920_22 1921_22 1922_23 1924_25 1925_28 1929_30	82750 8277.5 8277.5 8277.5 8277.5 8277.5 8277.5 8277.5 8277.5 8278.5 8278.5 8278.5 8278.5 828	261900 261800 261800 261800 261800 261800 261800 1638500 1638500 1705000 1705000 1705000 1775000 16775000 1777500 1777		1b
1928_29 1929_30 1930_31 1931_32 1932_33 1933_34 1934_35 1935_36 1936_37 1937_38	70075 66892 61248 56116 55123	182700 182100 182000 178300 190200 170700 174300 164400 186800		859

	물이 나는 아이들이 그 아이들이 되었다.	
1939 40	76523 276800	
	하는 하는데 보다는 사람들은 사람들이 되는 것이 없는데 그렇게 살아 있다.	
1940_41	75895 276800	
19/1-42	75895 276800	

BHAGALFUR DIVISION

YEAR	OUTPUT	AREA	YEILD	lbs
1892-96 1893-96 1893-97 1893-97 1893-97 1893-99 1893-99 18993-1900 19001-03 19002-03 19003-04 19005-06 19005-07 19008-19007 19008-1911-12 1912-13 1914-15 1915-17 1918-19 1921-23 1922-23 1922-23 19224-26 1922-23 19224-26 19223-24 19224-26 19223-23 19233-33 19333-35 19335-36 1937	41445 773990 1275994 77491 977300 1377300 1377300 13774063 907463 907463 907463 907463 907463 907463 907463 907463 101499 10256667 10310 9054091 104991 10893 10998 1089	291500 305400 305500 317100 309600 313600 316800 325700 347000 347400 310800 317400		411594428632300000005924080101699446058887244444 4115944428632300000592408010169944605888724444455

YEAR OUTFUT AREA YEILD lbs

1893 1894 1895 1896 1897 1897 1897 1897 1897 1897 1897 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1911 1911 1912 1913 1914 1914 1914 1914 1914 1915 1916 1917 1918 1922 1922 1922 1922 1922 1922 1923 1933 1933 1933 1933 1933 1933 1933 1936 1937 1938 1939 1941 1941 1941 1941	70589 7034690 510183 420083 420083 420091 430091 430091 4300	407600 407600 377000 3577000 3113000 3113000 3048000 492000 492000 4932000 4932000 4932000 4932000 4932000 4932000 4932000 4932000 4932000 4932000 4932000 4932000 4932000 5746000 5746000 574200 57420 57420	3000 3100

LINSEED	PATHA	DIVISION	

YEAR	AREA	OUTPUT	AEIPD,	lbs
1892_93	112000	9270		185
1893_94	92700	7933		191

1895_96 1896_97 1897_98 1897_98 1899_1900 1900_01 1901_02 1902_03 1904_05 1904_05 1906_07 1906_07 1908_09 1910_11 1911_12 1912_13 1913_14 1914_15 1915_16 1916_17 1917_18 1918_19 1919_21 1921_22	97900 101700 1017100 1054400 101106400 101106400 1012640 1012640 10	7853920310125977833924597913944597783392140843831123383514700139445974831338351477833939516897483955	198790026529233454512743452881076333282880597111 1998232334545127434528333282828880597111 1998233335344423283322222222222222222222222	

LINSEED	TTRHUT DIVISION
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YEAR	OUTPUT	AREA	YEILD	lbs
1892_93	55060	267100		461
1893_94	59540	287500		463
1894_95	53501	260000		460
1895_96	37688	245000		344

1896_97	21787	115600		422
1897_98	28342			350
1898_99	28342	181700		349
1899_1900		176500		354
1900_01		239300		293
1900_01		312200	40	244
		360800		452
1902_03				
1903_04		357800		358
1904_05		355700 318000		246
1905_06		246500		365 262
1906_07				252
1907_08		222300		181
1908_09		223800		361
1909_10		232600		
1910_11		254700		431
1911_12	60589	302500		448
1912_13	50550	281100	161/#11	402
1913_14	57402	280600		458
1914_15	43299	278500		348
1312710	43711	301700		324
1916_17 1917_18	54484	296500		411
1917_18	51694	330700		350
1918_19	51743	327800		353
1919_20	53068	332600		357
1920_21	54768			365
1921_22	48292			321
1922_23	66245			444
1923_24		338900		406
1924_25		323300		374
1925_26		276500		406
1926_27		276200		288
1927_28		277300		259
1928_29		298200		270
1929_30		283300		271
1930_31		282800		277
1931_32	30695			243
1932_33		273900		281
1933_34		248600		239
1934_35	34397	221100		348
1935_36		225200		317
1936_37	33869			329
1937_38	33789	224500		337
1938_39	31223			300
1939_40		226000		287
1940 41	29695			295°
1941-42	29695			295
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L	I	N	S	E	E	D	
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DHAGALFUR DIVISION

YEAR	OUTPUT	AREA	YEILD '	lbs
1892_93	6259	28500		491
1893_94	5996	27400	·	490
1894_95	5798	26400		491
1895_96	5504	25800		477
1896_97	5803	24200		537
1897_98	5864	26700		491

1898_99	6128		491
1899_1900			491
1900_01	6830 = 477		491
1901_02 1902_03	5477 5915		388 416
1903_04	7664	38100	450
1904_05	5508	33300	370
1905 06	5508 11192	78200	320
1906_07	13697	89600	342 342 372
1907_08	14968	90000	372
1908_09	6271 22025,	79900 97900	175 503
1905_07 1906_07 1907_08 1908_09 1909_10 1910_11 1911_12	2024	100300	453
1911 12	19527	100300 100500	4 O E
1912_13	18765	98700	425 422
1913 14	21509	104100	462
1914_15	14008	100600	311
1915_16 1916_17	18339	100700	407 385
1910_17	23885	147499	362
1918_19	14118	105600	. 299
1919_20	34249	152500	503
1920_21		109800	388
1921_22		141800	437
1922_23	29537		465
1923 <u>24</u> 1924 <u>2</u> 5		118300 139700	351 370
1924_25	18579		330
1925_20		102100	238
1927 28	8556	85500	224
1928_29	10586	91500	259
1929_30	11194	99500	252
1930_31		99100	215
1931_32	10431	98600 89800	236 208
1932_33 1933_34	13097	100800	291
1934 35		104100	259
1935_36	9825	82400	267
1936_37	9718	82700	263
1937_38	13459	121900	247
1938_39	13334	120900	247
1939_40	10584	104500 98800	226 204
1940_41 1941-42	9031 9031	98800	204
7747 30			

SUGAR	NORTH BIHAR						
YEAR	OUTFUT	AREA	YEILD	lbs			
1892_93 1893_94 1894_95 1895_96	341057 341660 288082 284486	371400 372200 323400 312200		2056 2056 1995 2041			

1897_98 1898_99 1898_1900 19001_01 19002_03 19003_04 1904_05 1905_06 1906_07 1908_09 1906_07 1908_1909_10 1911_12 1913_14 1914_15 1916_17 1918_1914_15 1916_17 1918_1919_21 1922_23 1924_26 1926_28 1926_27 1928_29 1928_29 1933_33 1933_34 1934_35 1935_37 1938_39 1939_40 1940_41	250407 2435740 2435707 2435707 2435707 2435707 2435709 2435109 24457153 24457153 24457153 24457153 24457153 24457153 24457153 24457153 24457153 24457153 24457153 24457153 24457153 24457153 24457153 24457153 24457153 24457153 24457153 245	294300 2817000 2817000 2817000 2408200 2449800 244384000 244384000 244384000 24172000 2180300 2180300 2180300 218030	219311395028771980944056 711944077693602211222222222222221121212222222222222
1941-42	445941	456850 ;	2186

SUGAR	PATNA DIV	VISION		
YEAR	OUTPUT	AREA	YEILD	lbs .
1892_93 1893_94 1894_95 1895_96 1896_97 1897_98	122693 123904 65495 61899 59387 66383	123700 125000 71600 60400 % 64300 70700		2221 2220 2049 2295 2068 2103

, upper Adam dest de de de de de de de

1898 99	64171	69200	2077
1899_1900	64171	69200	2077
	64174		2074
	71691		2141
1902_03	75693	81800	2072
1902_03	88448		2367
1904_05	78324		2007
	87233	84800	2076 2304 2380
1905_06	0/433		2004
1906_07	95960	90300	1700
1907_08	81710	102200	1790
1908_09	75806	95100	1785
1909_10	70547	90300	1750
1910_11	84644	91800	2065
1911_12	110557	95800	2585
1912_13	101943	94900	2406
1913_14	95681	92100	2327
1914_15	94769	413400	513.
1915_16	104218	92300	2529
1916 17	102907	97900	2354
1917_18	94873 89551	87700	2423 2107
1918_19	89551	95200	2107
1919_20	82733	91900 95300	2016 2196
1920_21	93436	95300	2196
1917_18 1918_19 1919_20 1920_21 1921_22	87852	93000	2110
1922 23	86521	93000	2083 1984
1923 24	93029	105000	1984
1924_25	74436	88600	1881
1925_26	88523	91200	2174
1926 27	79705	51870	3442
1927 28	83472	88800	2105
1928 29	85316	85900	2224
1929_30	86352	234600	824.
	87509		828.
1931 32	87810	237900	826.
1932_33	88661	233400	850.
1933 34	139274	94700	3294
1934 35	150651	102600	3289
1935 36	172982	112900	3432
1936 <u>_</u> 37	201430		3872
1027 20	60710	230300	678.
1937_38 1938_39 1939_40	109641	246700	995.
1979 40	123254	254700	1083
1940_41	120203	118000	2627
1941-42			2627
エンゼエーゼマ	TOGADA	110000	2001

SUGAR	TIRHUT DIV	ISION 🛴		
YEAR	OUTPUT	AREA	YEILD	lbs
1892_93 1893_94 1894_95 1895_96 1896_97 1897_98 1898_99	176646 177524 177523 177523 168988 142241 142461	168200 168900 169100 169100 157500 134400 134400		2352 2354 2351 2351 2403 2372 2374 2343

1900_01	138400	131000	2366
1901_02	64135		1951
1902_03	78342	81100	2163
1902_03	70042 70042	77000	1830
1904_05	49090	81300	1352
1905_06	10/050	87100	2699
1905_00	76519	07100	2042
1900_07	100587	93300	2441
1907_08	48568	92300	1312
1903_09		63700	1612
1910_11		79100	2447
1911_12	00404	85600	2495
	94038		2332
	98877		2436
	91529		2064
	86993		2157
			2216
	100636		
1917_18	86706	95100	2042
1319 13	96513	101700	2125
1919_20	102644	103300	2225
1920_21	98034	109500	2005
1921_22	117166	128700	2039
1922_23	101840	122500	1862
	128097		2315
1924_25	84114	121800	1546
1925_26	125333	125800	2231
1926_27	122759	125100	2198
1927_28	122282	125600	2180
1928_29	121279	125100	2171
1929_30	106502	121400	1965
1930_31	119137	115300	2314
1931_32	125449	133900:	2098
1932_33	156404	168000	2085
1933_34	325259	256300	2842
1934_35	331765	266300	2790
1935_36	332082	266800	2788
1936_37	285278	247800	2578
1937_38	212348	250600	1898
1938_39	215452	248400	1942
1939 40	267002	279800	2137
1940_41	253871	284250	2000
1941-42	253871	284250	2000
1391 46			

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YEAR	AREA	OUTPUT	YEILD	lbs
1892_93 1893_94 1894_95 1895_96 1896_97 1897_98 1898_99 1899_1906	79500 78300 82700 82700 80700 89300 90200 70900	41718 40232 45064 45064 44304 52312 41439 38123 41000		4268 4359 4110 4110 4080 3823 4875 4165 4316
1901_02	79300	93111		1907

4.000.00			4 5 6 6	
1902_03	77300	95011 48349	1822 3590	
1903_04	77500 79100	48286	3669	
1904_05	71900	74648	2157	
1905_06	46200	43954	2354	
1906_07	47400	38904	2729	
1907_08	39200	21135	4154	
1908_09	34300	30698	2502	
1909_10 1910_11	33700	32081	2353	
1011 10	33600	22574	3334	
1911_12 1912_13	32800	23572	3116	
1013 14	33300	23367	3192	
1913_14 1914_15	31300	19071	3676	
1915_16	33800	25935	2919	
1916 17	33900	21814	3481	
1916_17 1917_18	31800	24356	2924	
1918 19	30700	18672	3682	
1918_19 1919_20	33700	28243	2672	
1920_21	35100	39598	1985	
1921_22	39700	41993	2117	
1922_23	33300	32601	2288	
1923_24	33800	31424	2409	
1924_25	35000	29535	2654	
1925_26	32700	30333	2414	
1926_27	35100	32560	2414	
1927_28	34900	32951	2372	
1928_29	35300	32345	2444	
1929_30	29900	28620	2340	
1930_31	30700	27162	2531 2410	
1931_32	30300	28158	2514	
1932_33	30400	27081	2514 1588	
1933_34	36700	51743	1657	
1934_35	37900	51210	1643	
1935_36	49600	67603	2789	
1936_37	54200	43530		
1937_38	35000	30670	2556 2451,	
1938_39	32900	30062 44752	2407,	
1939_40	48100		2280.	
1940_41	54600	53638 53638	2280.	
1941-42	54600	<i>55</i> 000	2200.	

NORTH BIHAR

YEAR	OUTPUT	AREA	YEILD	lbs
1893—94 1893—95 1893—96 1895—97 1895—97 1895—98 1899—101 1899—102 1902—03 1903—04 1904—05 1904—05 1905—08 1906—08 1908—11 1911—12 1912—14 1913—14 1914—15 1914—15 1915—17 1915—17 1916—17 1917—1918 1918—22 1923—23	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	326511 3265511 3265511 3265511 3265511 3265510 3265510 3265510 3265510 3265510 3265510 3265510 3265510 3265510 326570 326670 32670 32670 32670 32670 32670 32670 32		44444444444444444444444444444444444444
1940_41	59487	345300		385

RAPE AND MUSTARD

PATNA DIVISION

YEAR OUTPUT EDGE VETTO 150	
YEAR OUTPUT AREA YEILD 1bs 1892_93 10903 44266 551 1893_94 10903 44266 351 1894_95 6691 44266 369 1896_97 7471 44266 373 1897_98 7894 44266 399 1898_99 7894 44266 399 1899_1900 1441 46100 554 1900_01 11138 45000 554 1901_02 6343 42000 338 1902_03 7551 35800 472 1903_04 9550 55800 384 1904_05 5276 40900 288 1905_06 6432 39900 361 1906_07 6016 36600 368 1907_08 2420 31000 174 1908_91 6680 40500 369 1910_11 8814 42700 462 1912_13	

RAPE AND MUSTARD

BHAGALPUR DIVISION

YEAR.	OUTPUT	AREA	YEILD	lbs
1893 1893 1893 1893 1893 1899 1899 1899 1899 1900 1900 1900 1900 1900 1900 1900 1900 1910 1911 1913 1913 1914 1913 1914 1915 1921 1922 1923 1924 1925 1928 1936 1936 1936 1936 1936 1936 1937 1938	44371 407219 407219 407219 407219 40796923 40796923 4179231 40	203750 203750 203750 203750 203750 187800 189800 229300 2257200 257200 270800 247300 247300 27540 275400 275400 275400 275400 275400 275400 275400 275400 275400 275400 275400 275400 275400 275400 275400 275400 275400 275400 27		44444444444444444444444444444444444444

YEAR	OUTPUT	AREA	YEILD	lbs
1893_94 1894_95 1895_96 1896_97 1897_98 1898_99 1899_1900_01 1901_02 1902_03 1904_05 1904_05 1905_06 1906_08 1908_08 1909_16 1910_13 1911_1 1911_1 1913_1 1914_1 1915_1 1915_1 1917_1 1918_1 1919_2	2817 2817 2378 2568 2568 2568 2005 2005 2005 2005 2016	172050 27200 27200 27200 47300 264400 25		311 305 281 237 234 382 382 382 382 383 267 299 204 305 327 299 204 307 207 207 207 207 207 207 207 207 207 2

1892_93 163 1800 303 1893_94 2044 14600 313 1895_95 1900 13000 327 1895_96 1218 11200 243 1896_97 3094 34000 325 1898_99 2163 12200 397 1898_99 1900 2163 12700 381 1900_01 2163 12700 381 1901 1901_02 33 10300 193 1902_03 1515 10800 314 1903_04 2216 15300 324 1904_05 1299 12000 242 1905_06 1572 12400 283 1906_07 1452 10900 298 1907_08 160 5100 70 1908_09 109 2700 90 1909_10 232 3100 167 191_12 382 2600 329 191_213
그는 이렇게 다른 () 🐆 보다는 그는 이미 () 그는 이미 전쟁이다. 동안이를 하는 그는 사람이는 그는 이 사람이 되는 이미 아이라를 들었다면 그렇게 그렇게 그렇게 이미 ()

YEAR OUTFUT AREA YEILD lbs

1892_93 50176 324700 346 1893_94 2564 22600 254 1894_95 1209 12300 234 1895_96 1515 14800 229	
1895_96 1896_97 1408 12600 1897_98 1356 10050 1898_99 1356 100600 286 1900_01 1356 100600 286 1900_02 1356 10000 286 1900_02 1356 10000 286 1900_03 280 1902_03 787 8100 217 1903_04 745 7600 219 1904_05 776 7700 225 1905_06 891 8100 240 1906_07 903 7600 1907_08 1230 10800 255 1908_09 681 7200 211 1909_10 1385 9100 1910_11 3423 10100 1910_11 3423 10100 1910_11 12 1423 10200 1313_14 1580 10700 130 1911_12 1423 10200 1313_14 1580 10700 130 1914_15 1843 12000 1344 1515_16 1622 12800 1916_17 1894 13800 307 1917_18 2811 18600 283 1918_19 2473 19100 1920_21 2334 16100 338 1918_19 2473 19100 1922_23 1604 14400 249 1924_25 1925_26 1901 13400 317 1924_25 1925_26 1901 13400 317 1924_25 1925_26 1901 13400 317 1924_25 1792 13500 297 1925_26 1901 13400 317 1926_27 1809 13400 317 1927_28 1803 13500 297 1928_29 1780 13400 297 1929_30 1793 13400 299 1930_31 1585 13400 299 1930_31 1585 13400 299 1930_31 1585 13400 299 1930_33 1584 13400 299 1930_33 1586 1370 14400 215 1938_39 1087 14400 193 1939_40 2150 16800	

YEAR	OUTFUT	AREA	YEILD	lbs
1892_93	42338	340000		278
1893_94	18878	134850		313

1894_95	178	1500	265
1895 96	145	1200	270
1895_96 1896_97	135	1200	252
1897_98	325	1200	606
1898_99	325	1500	485
1899_1900	325	1100	1 661
1900_01	325	3600	202
1901_02	514	3600	319
1902_03	515	3500	329
1903_04	417	3500	266
1904_05	493	3500	315
1905_06	922	7800	264
1906_07	834	6100	306
1907_08	615	6100	225
1908_09	409	5100	179
1909_10	1339	9400	319
1910_11	1198	7900	339
1911_12		8000	344
1912_13		8200	304
1913_14	1135	7900	321
1914_15	708	7300	217
1915_16	1142	7900	323
1916_17	688	6900	223
1917_18	628	5300	265
1918_19	392	5100	172
1919_20	920	5900	349
1920_21	774	5800	298
1921_22	422	2800	337 288
1922_23	579 664	4500 5400	275
1923_24	659	4900	301
1924_25 1925_26	394	4000	220
1926_27	434	4300	226
1927_28	475	4600	231
1928_29	262	2600	225
1929_30	402	4200	214
1930 <u>3</u> 1	338	4400	172
1931 <u></u> 32	432	4400	, 219
1932_33	323	37.0.0	195
1933_34	458	4800	213
1934_35	491	4700	234
1935_36	381	4100	208
1936_37	470	4600	228
1937_38	373	4000	208
1938_39	424	3800	249
1939_40	412	4000	230
1940_41	261	4000	146
1941-42	261	4000	146
		요요 아이 가장은 이 없었다. 나는 이 사람이	

HORTH BIHAR

YEAR	AREA-	CUTPUT	YEILD	lbs
18934 18934 18934 18934 18934 18936 18996 18997 18997 18997 18997 18997 18997 18997 18997 18997 19900 19900 19900 19900 19900 19900 19900 19910 19	144400 150500 191300 191300 189100 183800 188800 136800 1037500 1037500 1043900 105100 105100 105100 105700 105	5015286 5015286 5015296 501529766 501529766 50152974 501529294 5015294 5015		7919440 7919440 7919440 79199911111111111111111111111111111111
1940_41	105300	30430	나는 사용되는 신경 역사를 되면 되었다.	647

PATNA DIVISION

YEAR	AREA	OUTPUT	YEILD	lbs
1892 - 96 1893 - 95 1893 - 96 1895 - 97 1895 - 98 1897 - 98 1897 - 98 1899 - 1002 1900 - 03 1900 - 03 1900 - 04 1900 - 05 1900 - 07 1900 - 07 1900 - 07 1900 - 11 1911 - 13 1912 - 14 1913 - 15 1915 - 17 1917 - 19 1921 - 22 1922 - 24 1922 - 25 1923 - 26 1925 - 27 1925 - 28 1926 - 27 1927 - 28 1928 - 27 1928 - 29 1929 - 31 1931 - 32 1932 - 33 1933 - 38 1933 - 38 1933 - 38 1933 - 38	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	00050000000000000000000000000000000000		899 998 890 429 1120 1011 1294 1294 1294 1294 1085 1078 330 1120 1120 1120 1120 1120 1120 1120
1939_40	1800	, , , , , , ,		101

TIRHUT DIVISION

YEAR	AREA		OUTPUT	YEILD	1	bs	
YEAR 189293 189395 189496 189697 189799 1899190 190204 190204 190405 190607 190709 1900709 191113 191214 191315 191617 191718 191819 192021 192223	0	373500 35100 35100 35100 35100 35100 35100 36100	30400 33009 31774 27100 43410 29734 29734 29734 29734 29734 2979 25799 25799 25038 26799 25038 22679 25038 22679 25038 2449 2515 2679		788719997788711111111111919999	b 846 102 111 102 111 111 111 111 111 111 111	
1923_24 1923_24 1924_25 1925_26 1926_27 1928_36 1930_31 1931_36 1933_34 1935_36 1936_37 1938_39		54100 49200 75900 74100 72300 71700 57500 57500 57500 57500 57500	2282 2241 3058 3568 4115 3203 3600 3615 3181 2074 2031 2639 2383 2164 1905	872709009283388		045 1020 1044 1053 1243 1010 112 994 559 792 1028 311 342 301	

BHAGALPUR DIVISION

YEAR	AREA	OUTPUT .	YEILD	lbs
1893_94 1894_95 1895_96 1895_97 1897_98 1898_99 1899_190 1900_01 1901_02 1902_03 1903_04 1904_05 1905_06 1905_07 1908_09 1909_10	479000000000000000000000000000000000000	2534566 25347666 25347666 25347666 2531115 253111512 2535111512 253111512 253111512 253111512 253111512 253111512 253112		775 996 941 633 1120 697 701 1453 1605 81905 984 112 11220 1120 1120 1120 1120 1120 112

				IS A SEC
1938_39	42500	12	588	663
1939 40	46000	10	909	531
1940 41	41500	11	256	607
1941-42	41500	11	256	607

JUTE

1	9	3	9	4	0		7	0	7	40	33			2 (ŝ	46	0	0	Ü				5	9	88	5
- 12		4		-			7	Û	3	44	18			2	8 1	07	0	0					5	6	13	5
	1	4		-	-		7	O	3	44	18			24	81	07	0	0					5	6	1:	3

TIRHUT DIVISION

JUTE

JUTE

YEAR	OUTPUT	AREA	YEILD	lbs
1892_93 1893_94 1894_95 1895_96 1895_96 1896_97 1897_98 1898_99 1899_1900 1901_02 1902_03 1903_04 1904_05 1905_06 1906_07 1908_1908_1909 1910_11 1911_12 1912_13 1914_15 1915_16 1916_17 1918_19 1919_21_22 1922_23 1924_25 1926_27 1927_28 1928_29 1929_31 1931_32 1932_324 1924_25 1925_27 1927_28 1928_29 1929_31 1931_32 1932_334 1934_35 1936_37 1938_39 1939_40 1940_41	271179 274175 2933526 293674 251680 1781484 210587 31908 40681 123888 710238 481838 710238 481838 710238 481838 710238 481838 710238 481838 710238 718842 531389 5314351 28264 438406 277867 2603375 510141 615903 3751375 510141 615903 3751375 510141 615903 3751375 510141 615903 3751375 510141 615903 3751375 510141 615903 3751375 510141 615903 3751375 510141 615903 3751375 6689566 689566	91400 97800 97900 83900 59400 60500 70200 73200 73200 748400 2486900 241900 271600 219200 181600 232000 241300 241300 241300 160600 198900 194300 194300 176100 176100 176100 176100 176100 176100 176100 176100 176100 176100 176100 176100 176100 176100 176100 176100 176100		99 6719 6719 6719 6719 67719 61119 61119 6119 6